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HALF-YEARLY ABSTRACT
OF THE
MEDICAL SCIENCES.

JULY—DECEMBER,

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THE

HALF-YEARLY ABSTRACT

OF THE

MEDICAL SCIENCES:

BEING

A PRACTICAL AND ANALYTICAL DIGEST OF THE CONTENTS OF THE PRINCIPAL
BRITISH AND CONTINENTAL MEDICAL WORKS PUBLISHED
IN THE PRECEDING SIX MONTHS:

TOGETHER WITH A

SERIES OF CRITICAL REPORTS ON THE PROGRESS OF MEDICINE AND
THE COLLATERAL SCIENCES DURING THE SAME PERIOD.

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HALF-YEARLY ABSTRACT

OF

THE MEDICAL SCIENCES,

&c. &c.

PART I.

PRACTICAL MEDICINE, PATHOLOGY, & THERAPEUTICS.

SECT. I.—GENERAL QUESTIONS IN MEDICINE.

(A) HYGIENE.

ART. 1.—*On the therapeutic influence of the Southern Climatic Sanatoria, particularly with reference to Chronic Tuberculosis of the Lungs.* By Dr. RULLMAN, of Wiesbaden.

(Pamphlet, Churchill, 1861, pp. 32.)

THIS pamphlet is a translation by Dr. Wm. Daniel Moore, of Dublin, of a paper which was read in abstract at the Congress of Physicians of the Middle Rhine, at Frankfort, in 1860, and afterwards printed in the 'Würzburger Medicinische Zeitschrift,' Band 2, 1861. Dr. Moore's name is a sufficient guarantee that the pamphlet contains valuable matter. What appears to be of most practical value are the concluding passages, in which the author collates the southern climatic sanatoria whose climates are best understood, according to their mean winter temperature and their winter conditions of moisture and rain, placing them so as to form an ascending series, and these passages we copy.

The following numbers are the results of mean calculations based upon observations continued, in the majority of instances, during many years, and are borrowed from the monographs upon these sanatoria already quoted—Mittermeier's upon Madeira, Reil's on Egypt,

Sigmund's on the sanatoria of Northern Italy, and especially Vivenot's on Palermo, in which latter work the most numerous and most complete tables are to be found. The position in the series, when it is not justified by numbers, is based upon the explicit opinions of these and other competent authors (Bertherand on Algiers, Francis on Malaga).

I. SERIES.

Exhibiting the mean temperature of the winter—that is, of the months of November, December, January, February, and March :

Venice, ($40^{\circ}59$ F.).	Naples, ($51^{\circ}53$ F.).
Hyères, —	Palermo, ($54^{\circ}29$ F.).
Florence, —	Catania, ($54^{\circ}83$ F.).
Pisa, ($45^{\circ}79$ F.).	Cairo, ($58^{\circ}64$ F.).
Nice, ($47^{\circ}12$ F.).	Malaga, ($59^{\circ}00$ F.).
Rome, ($48^{\circ}62$ F.).	Algiers, ($61^{\circ}06$ F.).
Cannes, —	Madeira, ($61^{\circ}47$ F.).
San Remo, —	(Funchal).
Mentone, ($50^{\circ}0$ F.).	

In the case of Malaga and Algiers the temperature is calculated for the winter, including October.

II. SERIES.

Representing the mean atmospheric moisture in winter :

1. Cairo.	6. Mentone.	} Mean for Nov., Dec., Jan., Feb., and March.
2. Algiers.	7. San Remo.	
3. Hyères.	8. Naples.	
4. Nice.	9. Rome.	
5. Cannes.	10. Pisa.	
11. Madeira, $75\cdot4\%$. (Funchal).		
12. Palermo, $76\cdot2\%$.		
13. Venice, $80\cdot4\%$.		

III. SERIES.

Showing the number of rainy days in winter—that is in November, December, January, February, and March :

Cairo, 13·7	See Series IV.	Madeira, 55·7.
Malaga —		(Funchal).
Nice, 25·7.		Florence, 57·4.
Venice, 28·1.		Rome, 58·7.
Algiers, —		Pisa, —
Catania, 45·3.		Palermo, 65·7.

IV. SERIES.

Arranged according to the amount of rain in winter—that is, in November, December, January, February, and March :

Cairo, scarcely measurable.	Naples, 413·90 millimètres.
Venice, 229·99 millimètres.	Madeira, 548·44 "
Palermo, 364·06 ..	(Funchal).
Rome, 407·94 ..	Pisa, 548·90 "

ART. 2.—*On the Diseases of Hong Kong and the Canton River Station.* By Dr. SMART.

(*Proceedings of the Epidemiological Society; in British Med. Jour.*, June, 1861.)

This paper is based upon an abstract of the admission-book of the Royal Naval Hospital, Hong Kong, between 1846 and 1858.

Climatic diseases. The total numbers contained 11 per cent. of fevers, 31 per cent. of diseases of the intestinal canal, 2·3 per cent. of diseases of the liver and spleen, and 1·3 per cent. of undefined diseases, termed debility or cachexy. This group presented the following ratios of cures, invalidings, and deaths.

	Adm.	Cured.	Invalided.	Dead.	Rem.
Fever	621	517	65	37	2
Intestinal Diseases	1471	853	363	245	10
Liver-Diseases ...	107	61	26	20	0
Cachexies	59	36	22	1	0
Total	2258	1467	476	303	12

The mortality was thus more than one eighth of the number treated, and the invalids were one fourth of the remainder, unfit for further service on the station. That climate and the varying seasons have great influence on the production and in the aggravation of this group of diseases, was evident from the following return.

Period.	Adm.	Cured.	Invalided.	Dead.	Rem.
Quarter ending March ...	387	235	82	70	0
„ „ June.....	458	304	97	45	12
„ „ Sept. ...	664	474	114	76	0
„ „ Dec.....	746	454	183	112	0
Total	2258	1467	476	303	12

The healthy season is the spring, when the soil is thoroughly dry, previously to the commencement of the rains; and the unhealthy season coincides with the period when the plains are undergoing artificial drainage for the rice-harvest, or when the whole surface is drying by spontaneous evaporation, with no rainfall. The better or less unhealthy season embraces the period from February to May inclusive, and the isolated month of September. The more unhealthy seasons are from June to August inclusive, and again from October to January.

In the tables, the mortality of the entire class of fevers was shown to be as low as 5·04 per cent.; while that of what has been defined the “better season” was as high as 10·7 per cent., and that of the “worst” season was only 4·05 per cent.

The seemingly paradoxical conclusion arises from the fever-attacks of the summer being more numerous, and at the same time more the result of ordinary causes, and from which circumstance they are more amenable to treatment than the fever attacks of the “better season,” which are less numerous, but relatively more frequently of

the severe remittent type—the result of special exposure; so that an equal amount of mortality falls in a much smaller number of admissions.

Variola.—The Chinese inoculate for smallpox in the spring, so that the disease becomes epidemic among them at that season. Of fifteen cases in the Naval Hospital, seven came under Dr. Smart's care in the spring of 1859; and of these, four presented unquestionable marks of vaccination, two had not been vaccinated, and in one case vaccination was doubtful. The only fatal case was one of those unvaccinated. While three cases were in hospital at Hong Kong, the disease prevailed among our marine battalions at Canton, and also among the crews of ships at Whampoa, in the Canton River. In the propagation of cow-pox from imported virus, Dr. Smart found it uncertain in operation.

Diseases of the abdominal viscera were most intense in the months of falling temperature, with a drying soil—from October to January inclusive; and again in the hot moist weather, from June to August. It may seem strange that in the most densely populated country of Asia, with an immense river population, Asiatic cholera is not of more frequent occurrence in an epidemic form. In the thirteen years through which Dr. Smart's investigations extended, there was but one cholera season; and that was in the summer of 1858, at Hong Kong, when the cases, whether ashore or afloat, were fatal in large proportion.

Enteritis occurred most frequently in the latter half of the year; while gastritis was most common during the first half. Peritonitis seemed also to be a disease of the earlier months; and it was remarkable that pleuritis—the inflammation of another serous sac—was most frequent in the same months as peritonitis.

Liver diseases followed much the same order of occurrence as dysentery; but the inflammatory diseases of the liver seemed to be more prevalent earlier in the season, preceding, as it were, the bowel disorder.

The ratios of mortality and invaliding in liver-diseases was found to be almost equal to those of dysentery. Thus, the mortality were 20·4 and 20·8 per cent., and the invalidings 26·5 and 25·47 per cent. respectively, in the two diseases.

Inflammations of the spleen were either more rare or more difficult of diagnosis, nine cases only being recorded; of these none died, but five were invalided.

The distribution of fever-cases into the continued remittent and intermittent classes would at first sight appear to be a very simple and easily decided matter. In clinical practice, however, it is not so; and errors on this point are very frequently committed, especially in localities where the recognised causes of malaria are evident, and where all diseases, whether of the febrile or inflammatory organic nature, assume the periodic form as soon as the adynamic state of the vital powers supervenes.

Dr. Smart is disposed to consider that, in the majority of fever-attacks in Hong Kong, it may be discovered that simple exposure to the sun's heat, disregard of sanitary precautions, either voluntary or

enforced, indulgence in habits that derange the digestive functions or depress the nervous forces, have immediately preceded the invasion of fever, standing in the relation of exciting cause here as in every other country. These cases are amenable to the general principles of treatment in common continued fevers, whether of the ephemeral, congestive, synochal, or typhoid types; and they must not be brought to swell the charge of insalubrity of climate.

When the zymotic causes predominate, as in the summer and autumnal fevers of 1858 and 1859, among our troops in garrison at Canton, the typhomania and rose-coloured eruption which characterise "typhoid" are truly pathognomonic of the lesions to be met with in the autopsies. The history of such cases removes all doubt of the existence of the zymotic causes of typhoid in the southern cities of China, as in the crowded parts of the cities of Europe.

With regard to the affinity of remittent fever to dysentery, Dr. Smart was of opinion that dysentery is a disease as much of periodic type as the fever termed "remittent."

After entering fully into the various modes of treating the fevers and the dysentery of China, Dr. Smart noticed another form of bowel-flux that often proves fatal in that country. This form of disease is sent to the hospital, as diarrhœa acholyea, on account of the yeasty or pipeclay stools; as "diarrhœa with marasmus;" or as "diarrhœa with debility," on account of progressive emaciation and loss of energy; and, when aggravated by tenesmus, as "diarrhœal dysentery." It frequently proves fatal; and, most probably, the entire mortality by diarrhœa is attributable to this form of disease.

The same form of disease is known in India as "diarrhœa alba," and "hill-dysentery." It differs from tropical dysentery in not being a disease of deposit, but simply one of nutrition, from non-absorption of aliment, dependent on functional derangement of the chyle-absorbents, the spleen and the liver.

Entozoa are of frequent occurrence, especially among crews of ships on river-service. They were frequently found to exist in men labouring under other diseases, especially climatic fevers and bowel-disorders; and, in autopsies of such cases these creatures were commonly found alive in the intestines, or when perforation of these had taken place, in the peritoneal sac.

Diseases of the nervous system were more frequent in the latter half of the year, and their fatality was highest in the Christmas quarter. The increased rate of invalidings and deaths in the Christmas quarter is very marked under "paralysis" and "delirium tremens."

Hydrophobia, as a consequence of "rabies canina," is known throughout China.

Diseases of the respiratory organs were not of sufficiently frequent occurrence to make them of primary climatic importance. The admissions of the entire group amounted to 6.2 per cent. The ratios of deaths, 14.25 per cent., and of invalidings, 40 per cent., indicate more than the average severity of type. These numbers relate to idiopathic diseases; and, although Dr. Smart was not prepared to state the results of pulmonary complications of the climatic fevers,

he was of opinion that pneumonia, as a complication of fever, was less fatal, and pleurisy more fatal, than when of idiopathic form.

Phthisis runs its course with unwonted rapidity during the spring and fall of the year.

Syphilis has a very impairing influence on the effective numbers and individual stamina of our seamen on the China station. Although the total number of "genito-urinary diseases" was almost entirely of venereal origin, yet even that large number (nearly 16 per cent. of the nosological table, with 14·8 per cent. of invalidings) does not fully realise the enfeebling results of promiscuous sexual intercourse. The syphilitic cachexy is most difficult of eradication from the system in China, and has a marked influence on the effects of treatment in the climatic diseases, more especially in dysentery.

Diseases of locomotive organs.—Rheumatic affections form the bulk of this group, which comprised 7·7 per cent. of the whole nosological table, of which about 25 per cent. were unfit for further service. This large ratio is due to periosteal disease, as a consequence of syphilis; and from implication of the heart in arthritic cases.

Diseases of the integuments and glands constituted 17 per cent. of the total cases of disease, with a ratio of 10 per cent. of invalids, chiefly from abscess and scrofula.

Phlegmon is a distressing complaint to almost all new comers in spring and summer. In the form of furuncle, and sometimes of carbuncle, it displays the direction of the determination of blood, and, it may be, of excess of organic acids, towards the outer surface of the body. A crop of boils is generally regarded as a salutary effort of nature in those whose blood-crisis has not become acclimated to the hot, moist summer season; and they are borne with patience, under the conviction that their outbreak wards off climatic diseases. Boils are often preceded and attended by "lichen tropicus," another imputed salutary effort, of a milder type.

Abscess is often of a severe form. Not having seen any of the "cold" variety, Dr. Smart is disposed to consider acute suppuration in the areolar tissue as the ordinary cause, often setting in on the subsidence of fever. A mortality of 7 per cent. indicates the severity of these cases.

Ulcer in the sloughing form is common, and, when once commenced in a ship is most difficult of eradication. There is always disordered health in these cases, with a peculiar flushing of the skin, bright-red mucous lining of the mouth, or bleeding gums; sometimes terminating fatally by hæmorrhagic purpura. The urine is always highly acid; and Dr. Smart obtained from it the very finest specimens of uric-acid crystals, and sometimes the octohedral oxalates.

Leprosy exists among the Chinese, in the same form as that observed in the Levant. Those affected with leprosy are considered outcasts, and earn their livelihood by begging.

ART. 3.—*On the Climate of Upper Egypt.*

By the Foreign Correspondent of the 'Med. Times and Gazette.'

(Medical Times and Gazette, July 13, 1861.)

A brochure lately published by Professor Uhle, 'On the Winter in Upper Egypt as a Climatic Remedy,' contains much interesting matter. Professor Uhle spent the winter of 1856-57 in that country. He left Cairo at the commencement of December, and proceeded up the Nile as far as the second cataract in Lower Nubia, from whence he slowly returned to his starting-point, which he reached at the end of April. During this journey he investigated the climate, the temperature, and the moisture of the air on the Nile, and in that part of Upper Egypt situated between 26° and 24° lat. Concerning the temperature he observed on the journey up, after the 26° lat., a considerable degree of heat, which amounted on an average of for four months to 5° higher than Cairo. As to the moisture of the air on the Nile, it appeared that, contrary to the view generally received, the air there is very dry, as the moisture of the river is quite counterbalanced by the proximity of the desert; it is between 26° and 22° lat., the driest which as yet been examined in any part of the world. Towards spring the dryness increases, which is probably due to the falling of the river; February is the driest and coldest month, in consequence of the north and north-west winds which prevail at that time, by which fresh air from the desert is imported into the valley.

On comparing the climate of Upper Egypt with that of Madeira, Cairo, and Algiers, the first showed the highest winter temperature. The variations in the several months are greater than in Madeira, and the daily changes of temperature are also different, as between morning and noon at Madeira there is a difference of from 9° to 11.1° only, while on the Nile it is 22.5° . But the greatest difference exists in the moisture of the air, in its absolute amount as well as in its daily changes. The highest medium monthly moisture of Upper Egypt is 5.5 per cent. below the lowest of Madeira, the general medium of the former being 23 per cent. below that of the latter. The daily variations of the moisture are also very different in both places; while in Madeira the dry time at noon differs only 9 per cent. from the moisture observed at evening, the greatest difference on the Nile, between morning and noon, amounts to 29 per cent.

As to the therapeutical value of the climate of Egypt, Professor Uhle remarks that the patients may be in the open air the greatest part of the day, and during the whole of the winter there are only two or three days in which it would not be advisable for them to go out. The heat of the air never falls at noon below 54.5° Fahr., and seldom rises above 86° Fahr. Most days are fair and cloudless. The dryness of the atmosphere is in no way unpleasant. It is extremely pure, and has a very refreshing and exhilarating influence. But it should be taken into consideration that, should the patient fall ill while travelling on the Nile, he is quite helpless, and, as it is impossible to keep the temperature of the rooms different from that outside, a patient who is confined to his rooms is, on the Nile, exposed

to unfavorable rather than to wholesome influences. Concerning tuberculosis, the professor advises that patients should not merely spend one winter in the south, but that, instead of returning during summer to a more northern climate, they should spend it in Syria or Italy. On comparing Madeira and Egypt, special indications may be formed according to meteorological facts; that is, patients with congestion of the lungs and dry catarrh should be sent to Madeira; anæmic persons, and such in whom the mucous membrane of the bronchi is largely secreting, to Egypt. The latter is also suited for patients who are of weak constitution, and such as suffer from diseases of the chest generally, unless hyperæmia of the brain is also to be feared. Permanent results in tuberculous patients from the north were only observed if the deposits were confined to the tops of the lungs, and the patients spent two or three winters in Egypt.

ART. 4.—*On the influence of the Seasons upon the Human Body.*
By Dr. EDWARD SMITH.

(*Proceedings of the British Association for the Advancement of Science*; in
British Med. Journal, Sept. 28, 1861.)

Dr. Smith's experiments have been made on himself almost exclusively; one set having reference to the respiratory functions, and the other to the elimination of nitrogen. In reference to respiration, the amount of carbonic acid evolved varied from day to day with the cycle of the seasons. He has found that there was a definite variation in the amount of vital action proceeding within the body at the different periods of the year, and that this followed a well-marked course. Thus, at the beginning of June, a fall commenced; and this continued and progressively increased through June, July, and August, until the commencement of September, when the lowest point was attained. After this period, in October, an upward tendency was manifested, and it continued through October, November, and December, until January, when a point was attained from which there was little variation in January, February, and March. In April and May, the amount of carbonic acid evolved was yet further increased, until the point was reached whence he started. The extreme amount of change observed was a loss of three grains of carbonic acid per hour from the commencement of June to September; and the extreme quantities recorded were in May, 10.26 grains, and at the lowest period between six and seven grains. The same rule applied to the quantity of air expired, and to the rate of respiration. The rate of pulsation, however, increased as the heat increased—was the converse of the rate of respiration. As to the evolutions of nitrogen, the conditions were the opposite of those of the elimination of carbonic acid. The experiments show that on the very day of a sudden increase of temperature, there was a large decrease of vital action. Difference of season made a difference in the effect of a given degree of heat upon the body. In early summer, high temperature did not affect us so much as later, because then the ground was fresh and cool. The elimination of urea is proved to be direct in degree

according to the pressure of the air; with reference to carbonic acid, the effect is inverse. It might be at once inferred that the greatest growth of animals would occur at the period of largest amount of vital action; and in this point the animal and vegetable kingdoms were alike. Dr. Smith has been informed, and could well believe, that children grew more in summer than in winter. A late calf or a late brood of chickens is always stunted, compared with those born at the natural period; and this is closely connected with the question of the degree of viability of animals born at different seasons of the year. It was a fair probability to assume that the young of animals born at the period of least vital action, would have less power of resisting adverse circumstances than those born at the period of greatest vital action. Dr. Smith has obtained from the Registrar-General means of testing the point, as regarded 3000 or 4000 children born in the northern part of the kingdom, and he finds that of those born at the later period of the summer, a much larger number died than of those who were born during winter or spring. All epidemic diseases occurred at the period when the human system was shown to be decreasing in vital action, and were at their highest point when the vitality was least. Of cholera, there may have been some isolated cases during the winter; they may have increased during the spring; but it was always at the beginning of June when their number attracted attention. As heat advanced, so mortality increased; in August or September the greatest mortality always occurred, but the excess decreased in October, and disappeared in November.

ART. 5.—Report on Prison Dietary and Discipline.

By Dr. EDWARD SMITH and Mr. MILNER.

(*Proc. of Brit. Assoc. for the Adv. of Science*, in *Brit. Med. Journal*, Oct. 5, 1861.)

The reporters begin by remarking upon the diversity of rules and of employment in county gaols, and more particularly upon the wide differences in the dietary tables. It is customary to increase the amount of nutriment according to the duration of the imprisonment, and also to change the dietary from day to day. There is commonly an increased dietary given to those who are sentenced to hard labour; but the modes in which that labour is carried out vary much. The diet on the convict side of the Wakefield gaol is liberal and uniform. Mr. Milner, who has tabulated returns to show the variation of weight in the men during the first twelve months, states as follows:—During the first two months, the majority gained weight; in the second bi-monthly period, a loss occurred equal to nearly twice the gain during the first period; in the third, there was still a loss, but not to so great an extent; and the remaining three periods showed a steadily increasing gain. These prisoners had been brought from other gaols after trial and sentence, so that they have passed through that time of anxiety following upon commitment, during which there is reason to think that they fall off very much in condition and health. In a large proportion of cases, Mr. Milner believed that this change is followed by a feeling of relief, and a reaction against previously existing de-

pression; but later on the continued imprisonment begins to tell, and extra diet becomes necessary. With regard to prison employment, it was found that those who were kept at oakum-picking gained nearly 2 lbs. each; of men working at sedentary trades, as tailors, shoemakers, &c., the average gain was nearly 1½ lb. per man; of carpenters, mechanics, and men employed in winding the yarn, who work standing, a smaller per-centage gained weight, and the average was lower; of those employed in weaving canvass, making mats, &c., the majority lost weight. Amongst the hand-weavers of coir-matting, 80 per cent. lost weight, the average loss being nearly 7 lbs. per man. Amongst the men employed in yarn and coir-picking, 26·8 had to be placed on extra diet; in the second group, 26·4 per cent; third, 36·8; fourth, 39·4; while of the matting-weavers, 60·1 required additional food. The effect of milk in arresting loss of weight was found most striking. Thus the addition, upon Mr. Milner's recommendation, of a quarter of a pint of skimmed milk, containing not more than seven grains of nitrogen, to the daily dietary, caused a reduction in the extra diets from 22·35 per cent. in 1853, to 15·08 in the first nine months of 1854; to 15·27 in 1855, 14·08 in 1856, and to 9·56 in 1857. Experiments showed that the use of tea tended to lessen the weight of prisoners; and consequently that it was unsuited for extra diets. The results of experiments by Dr. Smith in the Coldbath Fields, Wandsworth, New Bailey (Salford), and Canterbury prisons, as to the effects of different kinds of labour, it was said, enabled a comparison to be made between the effects of the modes of punishment at the different gaols; and the results showed the great accuracy with which experience enables ordinary officials to regulate their systems of punishment to the full powers of endurance of the prisoners. Time for time, the effect of crank-labour is less than that of the treadwheel; but experience proves that the former is not inferior in severity to the latter, and, in the observation of many, has long been believed to exceed it. When the duration of the labour is considered, the effect of the crank at the New Bailey is so great that the treadwheel may be used as a relief from it. In comparing the effect of crank and treadwheel labour, it has been shown that the twelve-pound crank at Wandsworth and the so called seven pound crank at the New Bailey are equal time for time to that of the treadwheel at the New Bailey; and that the effect of the so called nine-pound crank at the New Bailey is nearly equal to that of the treadwheel at Coldbath Fields; but, as the time of actual daily labour at the crank is double that on the treadwheel, the whole daily effect of the crank must be double that of the treadwheel. The committee detailed the results of a considerable number of experiments as to the effects of prison discipline on the excretion of nitrogen and other substances. The committee thought that the time was approaching when the whole subject of prison discipline must be reconsidered, and when a conclusion may be arrived at as to the propriety of continuing a system which, when practised, occasions a vast waste of the vital powers of the prisoners, and vast expenditure of money to provide a dietary, which, although scarcely sufficient, is far beyond that provided for the poor in workhouses, and beyond that obtained by the working classes in general. Steps should be taken to secure

uniformity in discipline; and the mode of carrying out sentences should be proportioned to the crime. This might be done in the dietary, and yet allow of such varieties of food as might be found relatively economical in different parts of the kingdom. Instruments may be kept in proper order, and care be taken that the speed at which they are worked shall be uniform; the amount of a day's work would thus be the same throughout the kingdom, and the surgeon must decide as to the fitness of a particular person to perform the required task. A committee of scientific men, properly authorised by the Government, would find no difficulty in placing all this upon a proper basis. The effect of labour on the treadmill and at the crank, as well as of "shot-drill," varies according to height, weight, age, and previous occupations; and must therefore be at all times objectionable. The committee deferred their recommendation as to the exact adaptation of labour to supply of food; but, as it involves the fundamental question of the propriety of making the dietary an instrument of punishment, it was necessary *in limine* to decide it. The committee affirmed that the food supplied on the lowest scale is so totally inadequate to the wants of the system that it can only be regarded as an instrument of punishment. That it is so regarded may be inferred from the dislike which old offenders have to short imprisonment with its low dietary, and by the value which magistrates attach to this their most formidable agent. A dietary of bread and water, or bread and gruel, cannot be enforced without injury to the prisoner's health. The committee hoped that, on philanthropic grounds, the principle may be established that the prisoner shall not be so treated that when he leaves the gaol he shall be less able to earn his living than when he entered it; and that, punishment and reformation being sought together, some plan may be adopted which will accord with that principle. Bread is proved by the experiments of the committee to be less nutritive than milk. Mere detention in prison lessens the power of assimilation, so that a greater quantity of food must be required for performing given labour in prison than would be necessary out of prison. The object of extra diet is rather to aid the system in making a better use of the food ordinarily supplied, than to give additional material. Extra diet of bread (when the dietary is in the highest scale) is almost sure to be wasted. In conclusion, the committee urge the great importance of making better use than hitherto of the unparalleled opportunities which prisons afford of working out the most important questions in nutrition. Such questions are, the true value of brown bread over white bread in prison and other dietaries; the exact influence of various kinds of food, such as tea, coffee, milk, and alcohol, which act chiefly in influencing other food; the exact relation of a given quantity of food to a given amount of labour; the cause of the defective power of assimilation of food in prisons; and the relative elements of the food taken to those which are fixed in and thrown out of the body.

ART. 6.—*On the dangers connected with the manufacture and use of Artificial Leaves, Flowers, &c., coloured by Arsenical and Cupreous Substances.* By M. VAN DEN BROECK, Corresponding Member of the Royal Academy of Medicine of Belgium.

(*Bull. de l'Acad. R. de Méd. de Belgique*, 2d ser., vol. iv, 1861; and *Dublin Quarterly Journal of Med. Science*, Aug., 1861.)

M. van den Broeck raises another warning voice against the dangers of the colour of which Scheele's and Schweinfurth's greens form the basis; and in order that he may be the better understood by persons whose chemistry is at fault, he gives the composition of these greens; namely, of Scheele's, oxide of copper 44.52, arsenious acid 55.48, and of Schweinfurth's oxide of copper 34.27, acetic acid 18.94, arsenious acid 36.79. Then, after some preliminary remarks, he proceeds:

"There is a circumstance which will perhaps assist the idea I desire to promote, namely, that it is not merely the poor workwomen who have to suffer from the poisonous emanations of arsenical flowers. Those who work them up, merchants and milliners—those, above all, who wear them—often experience, without being able to account for what they feel, the pernicious effects of the poison which surrounds them. The head of one of the most important houses of business of this kind assured me, lately, that every time that he presides over the arrangement of a trimming into which a luxuriant foliage enters, he experiences a more or less violent headache, vertigo, nausea, and an obstinate dry cough.

"The workwomen whom he employs, being more exposed than himself, present these disagreeable symptoms in a still more marked degree. Moreover, my informant assured me that it is always with extreme reluctance, and by express command, that he undertakes such a task.

"After such an avowal, it is not difficult to imagine what passes in the midst of those worldly vortices where at the same time passions and flowers are agitated and shed. Shaken, crushed, and bruised, the poisonous foliage delivers to a burning atmosphere its brilliant and dangerous dust; the latter spreads everywhere, and on everything; clothes, hair, the moist skin, the air we breathe, nothing escapes its assaults, which are certainly not unconnected with the frequent illnesses which follow gay and extensive remissions. Sometimes even the effects of the arsenite of copper are immediately perceptible; and more than one woman is indebted to it for redness of the skin, and sufficiently serious cutaneous irritations. A case of this nature occurred to my knowledge during the course of the past winter; and my respected colleague, Dr. Warlomont, has just communicated to me two facts which support my assertions:—two ladies were attacked with intense erysipelatous eruptions, in consequence of wearing head-dresses containing arsenical flowers; on two occasions the same eruption was reproduced. It appears to me to be useful to demonstrate, in some measure, the connexion of these well-established circumstances with the danger I allude to.

"I procured a branch of the metallic verdure in question, and detached one of the smallest twigs. The latter consisted of a natural herbaceous panicle, which, after having been dried, undoubtedly has been dipped in an adhesive liquid, and pasted over with Schweinfurth's green. The effect of this sizing is charming to the eye; and it will easily be understood what favour an auxiliary must enjoy which so well sets off the freshness of the female toilet.

"Unfortunately, arsenical and cupreous green holds very badly, and the slightest crushing detaches it in large quantity.

"There would have been no use in a minute analysis; for the poisonous coating must, in general, vary very much. However, I was curious to know the approximate proportions in which the poisonous substance and the innocent matter existed. The twig which I detached, having been deprived of a very slight iron-wire which served as a support, was dried at 212° Fahr., and weighed; its weight was 0.171 gramme. Fearing to destroy the organic tissue if I employed an acid, even though dilute, I treated the colouring matter with water of ammonia.

"The fluid immediately assumed a magnificent blue colour, and furnished, directly and indirectly, all the reactions characteristic of arsenical and cupreous compounds; precipitation of metallic copper on iron; purple coloration by ferrocyanide of potassium; alliaceous odour on combustion: lustrous spots by Marsh's apparatus: no phenomenon was absent.

"When the little twig yielded nothing more to water of ammonia, it was washed, pressed between folds of blotting paper, and dried; it then weighed 0.100 gramme only; it had therefore lost 0.071 gramme, that is, more than 41 per cent. of its weight.

"I am well aware that from this quantity something should be deducted for the adhesive matter used to attach the cupreous salt, but a few trials demonstrated how insignificant the deduction on this head should be. Moreover, I repeat, minute exactitude in such a case would have been perfectly idle.

"It appeared useful to inquire in what proportion the arsenico-cupreous foliage might enter into the manufacture of a lady's head-dress.

"The master of a fashionable warehouse gave me, on this point, information as positive as possible. He showed me several ornaments in which green tufts alternated with bouquets of various flowers. These tufts were, generally, eight in number, each being composed of twelve little feathers. As the mean weight of each of these feathers was 0.25 gramme, each tuft weighed about three grammes, and the eight tufts together 24 grammes. Now, admitting the proportion indicated above to be constant, that is to say, 41 per cent. by weight of Schweinfurth's green, a lady's head-dress may contain 9.74 grammes of poisonous colouring matter, that is, something like 4.3 grammes of oxide of copper, and 3.6 grammes of arsenious acid; or, in other words, a quantity of arsenic thirty-six times greater than what, when taken by a man, has, under many circumstances, sufficed to cause death.

"I shall say no more on the subject of artificial leaves and flowers

coloured with arsenic and oxide of copper, and I shall draw attention to a circumstance attended with still greater disadvantages. For some time a light stuff called tarlatane has been met with in the repositories of fancy articles, presenting a splendid green tint, and possessing the rare property of preserving by artificial light all the magnificence of its lustre. It is almost superfluous to say that this stuff, like the flowers of which I have above spoken, is literally impregnated with poison. Specimens which I have procured have furnished in this respect figures almost appalling. Let the reader judge for himself:

"A piece of tarlatane, of $31\frac{1}{2}$ square inches, perfectly dry, weighed 0.272 grammes. This piece was first treated with boiling water, which dissolved almost all the feculent dressing; then, with water of ammonia, which removed the green colouring matter; and, lastly, with pure water. Once more dried to the same degree as before, the tissue, when completely decolourized, weighed only 0.151 gramme. It had, therefore, lost 0.121 gramme, that is to say, more than 44 per cent. of its weight. Now, with the exception of a very small quantity of dressing, this enormous diminution represented the poisonous matter with which the tissue was loaded.

"At first view, the importance of such a result is not apparent; but if we reflect upon the present size of female dresses, and calculate how much stuff enters into the circumvallation of a modern farthingale, we may form some idea of the immensity of the fact. The piece of tarlatane in question, which can serve only for a gown, gives to the latter, on the whole, a mean measure of nearly 92 square feet of material, raising the quantity of poisonous matter contained in a ball-dress to more than 420 grammes (about 13 ounces).

"With such a statement before us, all comment is useless. I shall, therefore, make none; but we must conclude. The Government, whose duty it is to watch over the public health, can no longer tolerate this incessant and unwarranted sale of one of the most dangerous poisons. By the laws at present in force, a pharmacien, that is to say, an educated and responsible person, cannot sell poison without a series of formalities amounting to absolute restriction; and should an ignorant individual be allowed to place in the hands of women and children, even more ignorant than himself, a poisonous substance, the manipulation of which leads to loss of health, and death? He who only *baptizes* the milk which he sells is condemned to fine and imprisonment, and shall a system which robs the artisan of health be allowed to continue? Impossible!

"But what do you wish? I shall doubtless be asked. Is it the prohibition of certain works, the closing of certain warehouses? By no means; I am too hostile to everything resembling, even remotely, any bar upon liberty, to advise such measures. What I demand is freedom, legality, and the regulation of a branch of industry which may become fatal to those who carry it on under unfavorable circumstances."

ART. 7.—On the health of the British Army. By Dr. FARR.*(British Med. Journal, Sept. 16, 1861.)*

At one of the meetings of the British Association for the Advancement of Science, lately held at Manchester, Dr. Farr read a very comforting paper on the health of the British Army. After paying a well-merited tribute of praise to the late Lord Herbert, Dr. Farr goes on to say that Lord Herbert, before his death, witnessed some of the results of his measures. He saw the marvellous sanitary success of the China expedition, and he received the first annual report of the Director-General of the Medical Department of the Army, showing a remarkable reduction in the mortality of all classes of troops. Lord Herbert did not think it enough to point out evils in a report; he got commissions of practical men nominated by Lord Panmure, placing himself at their head, to put an end to these evils. The labours of one of these commissions are described in a report by Dr. Sutherland, Dr. Burrell and Captain Galton, and its measures for improving the sanitary condition of barracks and hospitals are so well conceived that they deserve to be studied by all who take an interest in the health of armies. The sanitary and medical reports, of which Dr. Logan and Dr. Mapleson give samples, with the accompanying papers, will every year increase in value. The commission for carrying out improvements in the vital statistics of the army, consisting of Lord Herbert, Sir Alexander Tulloch, and myself, laid down an elaborate plan for the analysis of the sickness, &c., of the army, in peace or in war. That plan is in operation; and I would request your attention to some of the scientific results deducible from the first report. Under the new system an exact account is kept of the diseases of every soldier from the day he enters to the day he leaves the army or dies on the pension list; and the returns are so arranged as to exhibit the diseases of every regiment separately, as well as the amount of disability, invaliding, and death produced by each malady, and as far as possible by each conspicuous cause. The variable sanitary state of the army is thus brought clearly before the eyes of the Medical Department, the commanding officers, the Commander-in-Chief, and the Secretary of State, so that evils, instantly known, can often be suppressed as they arise. The books are now made portable, and so simplified that they will work in the field as well as in barracks. The efficiency of the army depends primarily on the health of the troops; the health being expressed by the relative numbers of sick and dying out of a given strength. The army at home consists of different arms, and, with embodied militia, its strength in 1859 was 90,753. The army consists of men in the prime of life, between the ages of twenty and forty, generally unmarried, and living hitherto together in barracks. We contended that, whereas 17 in 1000 of these men at home had died annually, a body so selected, well fed, well lodged, and well handled, morally and physically—admitting only recruits satisfactory to the examining medical officer, and parting constantly with its invalids—should not experience a higher rate of mortality than that expressed by 7 in 1000; the rate of mortality actually experienced by the popu-

lation at the corresponding ages in the healthy districts of England. That result was nearly achieved in the corps at home in 1859. The mortality of the Foot Guards had been 20 per 1000 (1837-46), and fell to 9; that of the infantry of the line had been 18, and fell to 8; which was also the mortality of the cavalry, the engineers, and the artillery. Some obvious sanitary arrangements were introduced; instead of being shut up in towns, the men were sent to healthy camps, and the above are some of the results. The annual deaths among all arms of the service at home had been 17.5; the deaths at Shorncliffe and Aldershot in the three years, 1857-58-59, were at the rate of 5 in 1000. The previous excess was referable to zymotic diseases, such as fevers, cholera, diarrhoea, and to consumption; the effects of crowding in barracks, of bad ventilation, bad water, bad drainage, badly chosen sites, bad cooking arrangements, and the absence of the means of cleanliness. A great result has been realised; in England hundreds of lives have been saved; indeed, a battalion living in arms at the end of the year 1859 would, at the previous rates, have then laid buried in their graves. Severe sickness has also decreased, and the vigour of the whole body of healthier men has, no doubt, increased in proportion.

AUT. 8.—*The Breath of Life, or Mal-respiration and its effects upon the enjoyments and life of Man.* By MR. GEORGE CATLIN.

(2vo, New York, Wiley, 1861, pp. 76.)

In this brochure Mr. Catlin, the well-known author of 'Notes of Travel among the North American Indians,' enunciates a new and extraordinary theory in medical etiology, namely, this, that many of the diseases of civilised communities are due to the habit of breathing through the mouth instead of the nose. He says, "If I were to endeavour to bequeath to posterity the most important motto which human language can convey, it should be in *three words*—

"SHUT—YOUR—MOUTH."

"In the social transactions of life, this might have its beneficial results, as the most friendly, cautionary advice, or be received as the grossest of insults; but where I would point and engrave it, in every *nursery*, and on every *bedpost* in the universe, its meaning could not be mistaken; and if obeyed, its importance would soon be realised."

The arguments upon which Mr. Catlin founds his theory are not very conclusive. The one upon which most stress is laid is this:

"All savage infants among the various native tribes of America are reared in cribs (or cradles), with the back lashed to a straight board; and by the aid of a circular, concave cushion placed under the head, the head is bowed a little forward when they sleep, which prevents the mouth from falling open; thus establishing the early habit of breathing through the nostrils. The results of this habit are, that Indian adults invariably walk erect and straight, have healthy spines, and sleep upon their backs, with their robes wrapped around them,

with the head supported by some rest, which inclines it a little forward, or upon their faces, with the forehead resting on the arms, which are folded underneath it, in both of which cases there is a tendency to the closing of the mouth; and their sleep is therefore always unattended with the nightmare or snoring."

Another argument is somewhat more tangible:—"What physician," he asks, "will say that the inhalation of cold air to the lungs through a mouth foul with putrid secretions and beset with rotten teeth may not occasion disease of the lungs and death? Infected districts communicate disease—infection attaches to putrescence, and no other infected district can be so near to the lungs as an infected mouth."

* * * * *

"The American Indians call the civilised races '*pale faces*,' and '*black mouths*,' and to understand the full force of these expressions, it is necessary to live awhile among the savage races, and then to return to civilised life. The author has had ample opportunities of testing the justness of these expressions, and has been forcibly struck with the correctness of their application, on returning from savage to civilised society. A long familiarity with red faces and closed mouths affords a new view of our friends when we get back, and fully explains to us the horror which the savage has of a '*pale-face*,' and his disgust with the expression of open and '*black mouths*.'"

In allowing infants to sleep with the mouth open, moreover, Mr. Catlin would have us believe that we are thoughtlessly laying the foundation for the rich harvests which dentists are reaping in every part of the civilised world. "The infant," he says, "passes two thirds of its time in sleep, with its mouth open, while the teeth are presenting themselves in their tender state to be chilled and dried in the currents of air passing over them, instead of being nurtured by the warmth and saliva intended for their protection, when they project to unnatural and unequal lengths, or take different and unnatural directions, producing those disagreeable and unfortunate combinations which are frequently seen in civilised adult societies, and oftentimes sadly disfiguring the human face for life."

The text is illustrated by several graphic illustrations which will remain in the memory of those who have seen them.

ART. 9.—*On Pus-cells in the Air and on the Aëroscope.*

By Dr. EISELT.

Wochenbl. der Zeitsch. d. G. der Aerzte zu Wien, No. 13, 1861; and *Medical Times and Gazette*, Sept. 14, 1861.)

During an epidemic of purulent ophthalmia, which occurred at the Foundling Hospital, near Prague, Dr. Eiselt had the opportunity of proving in his own person that infection may take place in other ways than by contact. As the attending physician, he took every precaution to protect his own eyes from any contact with the matter proceeding from the children, which it was easy for him to do, inasmuch as the syringing and cleansing of their eyes was performed by the sisters of the establishment. Still, being engaged in the hospital for several hours daily, he perceived smarting and heaviness of the eyes, followed

afterwards by reddening of the conjunctiva, with an œdematous state of the portion lining the eyelids, and a considerable secretion therefrom. The same symptoms were observed in all the persons who had care of the children. Some of the nurses became seriously affected from getting matter into the eyes, and others they knew not how. The inconvenience, as regards the author, was checked by the use of weak stimulant collyria.

He asks, "How comes it that acute purulent ophthalmia may thus be excited without any contact, in the common sense of the word?" and refers in explanation to Pouchet's recent experiments with the *aëroscope* as described in the '*Comptes-Rendus*' for 1860. Professor Purkinje constructed a similar instrument for his use. Its principle consists in forcing a determinate quantity of the air to be examined over a glass plate smeared with glycerine, which detains the particles of dust and microscopic structures for examination. By means of this instrument (for details of the structure of which we must refer to the paper) the air was examined which existed in a ward containing thirty-three children suffering from acute purulent ophthalmia, accompanied by abundant secretion. Pus-corpuscles were at once detected in the portion of air examined; and this fact the author considers supplies the rational explanation of the propagation of the disease without apparent contact with the secretion from the eyes.

In No. 19 of the same Journal, Dr. Schneider gives an account of a new apparatus for analysis of the air, in which he employs cotton-wool in place of glycerine.

(II) ACUTE DISEASES.

ART. 10.—*On the exhibition of Food in Typhoid Fever.* By M. HÉRARD.

(*Journ. of Pract. Med. and Surg.*, May, 1861.)

The following excellent remarks are taken from a clinical lecture at the Hôtel Dieu at Paris, where, for the present, M. Hérard occupies the place of M. Rostan.

The treatment of typhoid fever is of course different according to the theory adopted on the nature of the disease. The practitioner who views in typhoid fever follicular inflammation of the intestinal tube, an ulcerous affection of Peyer's glands, and consequent absorption of poisonous fluids calculated to induce a septic condition, consistently prescribes antiphlogistic remedies in the incipient stage, and tonics in the more advanced period of the disease. Likewise, those who conceive that the decomposition of the local secretions is the primary cause of the infection of the system act consonantly with their theory in systematically exhibiting emeto-cathartics and laxatives. In these opinions, however, M. Hérard does not participate; while taking into serious account the intestinal eruption, which, like that of smallpox, induces a certain amount of circumambient inflammation, he cannot admit this to be the proximate cause of typhoid fever. No concordance can be traced between this anatomical change and the general condition of the patient, the gravity of which must be acknowledged to be entirely independent of the local injury. Hence the latter cannot be taken for a guide in the choice of the medication most

appropriate to a fever in which the collapse of vital power and the obvious tendency to hæmorrhage and mortification point most distinctly to a primary alteration in the composition of the blood. M. Hérard does not deny that an emeto-cathartic may be proper to remedy the foul state of the primæ viæ, so common in the early stage of typhoid, but he can neither concede to aperients, to venesection, nor to local bloodletting, the privilege of being the exclusively appropriate modes of treatment of the disease.

In typhoid fever M. Hérard proceeds as follows :

In moderate, and *à fortiori* in mild cases, he refrains from any active interference calculated to debilitate the patient, and to cause the disease to assume the dangerous form which justly occasions so much dread. M. Hérard prescribes an emeto-cathartic, one or two doses of saline aperients, a few baths if the skin be very hot and dry, and wine and water. Baths restore the functions of the skin, and usually induce sleep. In the adynamic variety he resorts to tonics, stimulates the system with Malaga or Bordeaux wine, either in drinks or in enemas, prescribes from half a drachm to a drachm of powdered cinchona bark, in coffee without milk, and also recommends various stimulants, such as musk, camphor, acetate, and carbonate of ammonia. He causes, at the same time, the eschars to be covered with powdered Peruvian bark, and requires from the nurses the most strict attention to cleanliness. In the ataxic form, the most fatal of all, bloodletting, leeches, blisters, are unavailing; all remedies seem powerless. In order, however, not to appear entirely inactive in cases of such dire gravity, he prescribes stimulants, dry cupping of the extremities, blisters to the nape of the neck, and cold affusions cautiously administered. In the thoracic form, which this year has been the most prevalent, blistering and cupping, with scarification, are the remedies which M. Hérard has chiefly resorted to.

The above is a brief summary of the treatment appropriate to typhoid; but in the management of the disease the all-important, the capital question is that of food.

Despite the wise precepts of Hippocrates, said M. Hérard, despite the recent researches which have only confirmed their value, we are still all more or less influenced by the now exploded doctrine of irritation. The terms fever and food still appear to imply a contradiction, although it is but too certain that in typhoid prolonged abstinence leads to the most disastrous results.

Some ten years ago, M. Hérard was in attendance on a lady suffering from a moderately violent attack of the malady under consideration. Cerebral symptoms having set in, a consultation took place, and an eminent professor of the school of medicine recommended absolute abstinence from food, and the daily exhibition of one or two glasses of seidlitz water. The latter part of the prescription M. Hérard took upon himself in some degree to modify, but the abstinence was strictly enforced. After two or three weeks' treatment the pulse rose from 110 to 120, nocturnal agitation set in, with wandering, delirium, vomiting, and diarrhœa. On the following days the frequency of the pulse increased to 145, vomiting became incessant, the diarrhœa incoercible, the delirium constant; the tongue was red, and thrush appeared over the entire mucous lining of the mouth. Another

consultation was deemed expedient; the three gentlemen whose opinion was requested viewed the case in a different light. One pronounced the patient to be suffering from softening of the stomach; the others, struck by the pinched countenance, the emaciation of the entire body, and the cough which had set in in the incipient stage of the disease, believed in galloping consumption, and proposed cod-liver oil. M. Hérard, who had long been acquainted with the patient, found it impossible to adhere to any of these views, and moreover, unable to venture, under the existing circumstances, on the exhibition of cod-liver oil, surmised that the previous protracted abstinence might possibly have some share in the aggravation of the symptoms, and determined upon trying the effects of nutriment. He found it almost impossible at first to carry out this plan, and it was with the utmost difficulty that a few drops of iced beef-tea were swallowed. He succeeded by dint of perseverance however; and when the food remained on the stomach, and in proportion to its increase, the pulse fell from 145 to 130, 120, 115, and 100; the delirium yielded, and, in short, the patient recovered.

M. Hérard is convinced that similar cases are of not unfrequent occurrence, and that the dangerous symptoms of the ataxic form of typhoid are often induced by the strict abstinence previously enforced. In a highly interesting paper on the subject, M. Marotte has established that vomiting, diarrhœa, and delirium, more especially the latter, are characteristic of starvation. In a lecture recently published, M. Trousseau already pointed out the striking analogy existing between the more serious symptoms of typhoid and those of autophagy consequent on protracted abstinence. The valuable experiments of M. Chossat may further be adduced in illustration of the theory which accounts for this extremely important fact, and must lead to a complete change in the treatment of typhoid fever.

The expression we advisedly use is treatment, not diet. Nutriment here must be viewed not as an adjuvant, but as the principal medicinal agent. It has been objected that if food be exhibited, indigestion and emesis must follow. This is correct after protracted abstinence, and proves the necessity of early alimentation, otherwise the digestive powers of the stomach become impaired and the food is rejected. Opponents of the method further urge the impossibility of venturing on the exhibition of nutriment, on account of the deposits which necessarily exist on the mucous surface of the stomach, and poison the breath of the patient by their decomposition. Now these deposits are frequently but one of the consequences of abstinence, and if the tongue and gums are cleansed with a brush impregnated with honey of roses or syrup of mulberries, the sores do not form again after the ingestion of food. M. Hérard had recently under his care, at Lariboisière, patients who have fasted for three weeks, and who displayed marked distaste for any kind of nutriment. The gums were covered with sores, the breath was foul; but after cleansing the mouth and scraping the tongue, food, which these patients were compelled to take, produced its usual salutary effects, and in a few days was accepted with pleasure and with the most beneficial results. M. Marotte relates the case of a young man, aged twenty, who at first compelled to eat, soon took his food with pleasure, and ultimately recovered in an unhopèd-for manner. The propriety of feeding patients suffering from

typhoid has also been questioned in another respect; the presence of intestinal ulceration, of tympanitis and diarrhœa had been viewed as a direct counter-indication to the exhibition of nutriment, and as the probable cause of the most perilous symptoms in case this method was resorted to. This fear is entirely chimerical. You must not, moreover, forget that the cachectic condition of the patients is the greatest possible obstacle to the healing of the ulcers, and that the latter are portals through which poisonous principles will most readily be admitted. Subjects affected with intestinal ulcerations should be fed, and the ulcers, nevertheless, decrease in size, and heal in the same manner as bed-sores, so common under similar circumstances, yield to the influence of generous diet. Some short time ago, a woman was admitted into the Hôtel-Dieu, on the twentieth day of a typhoid fever complicated by extensive mortification in the region of the sacrum. Nutriment, appropriate in nature and in quantity, was gradually exhibited, and the wound speedily lost its pale aspect, assumed a more healthy hue, granulated and healed. Had abstinence from food been here persevered in, she would very probably have perished; but a contrary course was followed, and she recovered rapidly. Another beneficial effect of nutriment is to shorten the duration of the convalescence, which formerly was interminable after putrid fever. Patients, who have received adequate support during the progress of typhoid, have been known to pass without any transition from disease to health, and to walk in the garden of the hospital on the very first day they left their bed.

It is not unimportant to inquire what should be the nature of the nutriment allowed? It was formerly the custom to exhibit food when only the feverishness had subsided, and it sometimes unfortunately happened that the delay was so long as to render the food superfluous. Other practitioners prescribe broth, under the impression that broth is sufficient support to the system. Broth is doubtless a nutrimental substance; we are all acquainted with its restorative power, but we must not exaggerate its value. M. Bouchardat demonstrates that a quart of broth contains but six drachms of solid nutriment, two of which are saline ingredients; subtract from the remaining four drachms a certain amount which passes through the kidneys, and you will doubtless agree with me that the residue affords but insufficient support to the system.

M. Hérard proceeds then to describe his mode of administering food in typhoid. Soups are, in his opinion, the best articles of diet; egg-flip is often useful, and contains a large proportion of nutriment especially applicable in the thoracic variety of the disease. Jellies are also advantageous, and when, on account of their volume, soups are not easily digested, the professor, even at an early period of the fever, does not hesitate to recommend the suction of a mutton-chop. Patients, whose stomach rejects the weakest broth, frequently digest with facility a small piece of broiled beef or mutton. He is no friend of the debilitating *tisanes* and diet-drinks usually prescribed, but agrees with M. Monneret in the utility of wine, as a stimulant of the vital powers. The beverage he recommends is weak wine and water, and in addition, eight ounces of Bordeaux or bark wine to be taken in

enemas if necessary. When the digestive powers of the stomach have been much impaired, he conceives that pepsine, acting as a kind of ferment, promotes the assimilation of the food and gives the gastric viscera time to recover their secretive action, the patient, in the meanwhile, not suffering from the effect of injurious abstinence. Fifteen grains of pepsine may therefore be exhibited in a wafer with animal food.

In addition to these physical restoratives, M. Hérard has recourse to moral agency. The greater number of individuals suffering from typhoid fever in the hospitals are young people of both sexes, not only strangers in Paris, but often foreigners. Their isolated condition, combined with the knowledge that they are labouring under serious illness, has much to do with the low condition into which they speedily fall. Hence the importance of encouraging such patients by a kindness of manner and of language calculated to improve their moral condition, and to counteract the unfavorable influence exercised upon their system by the distressing circumstances under which they happen unfortunately to be placed.

ART. 11.—*On the changes of temperature in Typhoid Fever.*

By Dr.———

(*Medical Times and Gazette*, Sept. 26, 1861.)

According to Professor Wunderlich (whose observations include upwards of 700 cases), typhoid fever has two perfectly distinct stages, which may be recognised by means of the thermometer. In the former of these, infiltration and exudation takes place; in the latter we have retrogressive metamorphosis, elimination of the morbid matter, and healing of the diseased parts. Besides these two periods, the thermometer can show several other points in which a change in the general condition of the patient takes place, which are not accompanied by anatomical changes. It is thus possible to show that periods of the disease are not of variable length, but have a fixed duration, and that in regular, or nearly regular cases, the time in which the change in the general condition takes place is equivalent to the end or the middle of the disease. Typhoid fever is, in fact, a typical disease, bound to a certain course, and only slightly influenced by accidental circumstances; and it is distinguished from every other disease by its type. There are, however, irregular cases, which are due to certain causes, and which cannot exceed certain limits. The more perfectly the normal type of the disease is exhibited in an individual case, the more certain is a spontaneous cure of the complaint. Every irregularity ought to excite our suspicion, especially if it is dependent upon notoriously dangerous influences. Anomalous cases may be apparently milder than those which are regular, but the improvement in them must be more considerable, more decided, and more permanent, if the issue is to be favorable.

The period of exudation and infiltration extends, on an average, over two weeks; in mild cases, one and a half; in severe, two and a half, and sometimes even three weeks. This period is again to be

divided into the initial stage, which lasts three or four days, and in that of the acme, which fills up the remainder of the first period. The duration of the period of retrogressive metamorphosis and healing differs very much according to the extent of the anatomical lesions; it may be a week, and it may be six weeks, or even more. There are, however, two essential differences in the course of typhoid fever: one set of cases is of a mild form, the stage of acme lasting only one to one and a half week, exceptionally two weeks, that is, at most until the eighteenth day of the illness; the stage of retrogressive metamorphosis then follows in a very decided manner, and lasts for one or two weeks; so that the whole illness lasts from three to four weeks, and in very favorable cases only two and a half weeks. Then we have another set of cases of typhoid fever, the severe form, in which the period of infiltration lasts longer, and that of retrogressive metamorphosis commences with severe symptoms of fever, the stage of acme extending over two to three and a half weeks, and being in many cases followed by an intermediate or "amphibolous" stage, during which an uncertain improvement and unaccountable relapses are observed. This stage is of uncertain duration, and it may end fatally, or even not appear at all. If the case takes a favorable turn, then a stage of decided remission follows, which lasts at least a week, and is followed by the feverless stage (two weeks and more). The whole illness lasts, therefore, if the patient recovers, from four and a half to ten weeks.

Within the first week the thermometer is often able to render the diagnosis certain, if other symptoms cannot do so, as the temperature rises in the following characteristic manner:—In the first half of the week it augments from morning to evening to 1° R. (2.25° F.), and from the evening to the following morning it falls $\frac{1}{2}^{\circ}$ R. (1.1° F.), as is shown in the following table:

INITIAL STAGE OF TYPHOID FEVER.

	Morning.	Evening.
First day	29.5° R. (98.3° F.)	30.5° R. (100.6° F.)
Second day	30.0° R. (99.4° F.)	31.0° R. (101.7° F.)
Third day	30.5° R. (100.6° F.)	31.5° R. (102.8° F.)
Fourth day	31.0° R. (101.7° F.)	32.0° R. (104.0° F.)

In the second half of the first week, the evening temperature remains at 31.7° R. (103.3° F.), generally 32° R. (104° F.), and more; while the morning temperature is $\frac{1}{2}^{\circ}$ R. less. *There is no typhoid fever* when the temperature rises to 104° F. on the first or second day of the illness; when the evening temperature in a child or an adult person does not rise to 103.3° F. between the fourth and sixth days; when during the second half of the first week a considerable or progressive decrease in the evening temperature takes place. On the other hand, if the case is apparently one of a mild indisposition, we may, by finding the temperature permanently increasing, especially in the evening, be led to assume the existence of typhoid fever.

Regarding prognosis, the thermometer does not give us a decided clue during the first week. Only if the case is going to be very mild or very severe, we find a very moderate or an enormous increase of temperature accordingly. In many instances the other symptoms

may be very mild, but a considerable increase of temperature will excite our suspicion in the very beginning, so that we may recognise great danger at once. Irregularities in the course of temperature during the first week are always a very bad sign; and the thermometer is the only means which can show us during the first week the favorable or unfavorable working of a spontaneous occurrence or of a certain influence brought to bear upon the patient.

During the second week the diagnosis may be rendered certain by means of the thermometer alone. There is no typhoid fever, if the temperature is, on one or several evenings between the eighth and eleventh day of the illness, below 103.3° F.; on the other hand, no acute disease excepting typhoid fever is likely to show during the evenings mentioned a continual temperature above 103.3° F., and if this should be the case, there will be other striking symptoms which will render the diagnosis very easy. The thermometer at the same time shows the form (mild or severe) of the disease and its probable course, at a time when no other symptom can give a decisive clue in this respect. If the second week appears favorable, the third week will be still more so, and the convalescence will begin in the latter or at all events in the fourth week. If, on the contrary, the second week is severe, there will be no decided improvement in the third, and the course will be very dangerous. It is a most favorable symptom when the evening temperature in the second week varies from 103.3° F. to 104° F.; when the morning temperature is 1° to 2° lower, when the exacerbation does not commence before ten o'clock a.m., when the remission sets in before midnight, and when all these occurrences are repeated every day in a similar manner; or when a very slight diminution of temperature ($\frac{1}{2}^{\circ}$ to 1° F.) is perceptible during corresponding hours from day to day, or when on the eleventh, twelfth and fourteenth, a considerable remission is observed. If, on the contrary, the morning temperature in the second week remains constantly at 102.8° F., and the evening exacerbation reaches or rises above 104.6° F., when the exacerbations set in at an early hour and extend beyond midnight, and if there is no remission in the middle of the week, the prognosis is bad.

Every irregularity in the second week is awkward, temporary remissions as well as exacerbations. In such cases the further course of the disease is also generally irregular; and although the disease may sometimes rapidly heal, even under these circumstances, relapses, fresh exacerbations, complications and hypostrophes, are of more frequent occurrence. It is also an especially unfavorable sign when there is no trace of remission in the second week, even if the morning temperature does not exceed that of the evening. It is a certain sign that the course will be very severe if the morning temperature is at or above 104° F., and if the evening is at 106° F., especially if the increase is considerable towards the end of the week; and it is a most dangerous sign if these symptoms alternate with sudden remissions.

In the third week the diagnosis can always be made for certain by means of the thermometer, and mild cases are most accurately distinguished from severe ones. In the former there are now larger re-

missions in the morning, the temperature being 3° to 4° F. lower than in the evening, and sometimes even going down to its normal average; while in the evening it also rapidly diminishes, and in the middle of the fourth week it becomes altogether normal.

In the severe form there may be either remissions, so that although the fever is still of a continuous character, the temperature is no longer so high as it was in the second week, but is about 1° lower; this is the most favorable turn, and large remissions will then generally follow in the fourth week. Or the temperature remains as high as it was in the second week, or becomes even higher; in this case there is great danger; the fourth week will then be severe, generally irregular; and if the patient holds on through this, decided remissions will commence only in the fifth week. Or there may be irregularities in the course which render the prognosis doubtful.

From the third week the measurement of the temperature is in all cases the most distinct guide for recognising a regular course—variations and disturbances, the commencement and progress of improvement, the favorable or evil effect of influences, occurrences and medications, the entrance of sudden danger, the arrest of healing, the renewed increase, relapses, complications and hypostrophes.

The approach of death is more certainly shown by the state of the temperature than by any other symptom. There is either an unusual increase of temperature (above 106°) in the period of acme, or there is a sudden increase of temperature to 108° or more; or there is a sudden and very considerable fall of temperature (96° F. and below), together with great collapsus; or there is in the period of healing a decrease of temperature; which is in contrast with the other symptoms.

The entrance of perfect convalescence can only be assumed when there is no longer any increase of heat in the evening. This is the only certain way of determining this point, and any noxious effect of diet, &c., may be most rapidly and securely recognised by finding a new augmentation of heat.

ART. 12.—*A second attack of Typhoid Fever, with distinct Rose Rash, after a fortnight's interval.* By Dr. HARDWICK, Physician to the Leeds Fever Hospital, &c.

(*Medical Times and Gazette*, May 11, 1861.)

CASE.—Samuel S—, æt. 18, a mechanic, residing in Leeds, was admitted on December 11th, 1860. The fever commenced on December 2nd, with rigors, headache, &c. When admitted, his tongue was white; skin hot, but rather moist; pulse quick and regular; no diarrhœa. There was a well-marked and rather abundant rose rash on the abdomen. He was very restless at night, but not delirious. He was ordered to take an ounce of *Liquor Ammonizæ Acetatis* every four hours; and eight grains of Dover's powder every night. The medicine caused profuse sweating, and the case progressed favorably afterwards.

On December 20th his tongue was dry and rather brown; stools were thin and pale, but not frequent.

28th.—Decidedly improving.

January 9th.—He was removed to the convalescent ward, where there were three or four other patients who had recovered from typhoid fever.

On January 19th he complained of headache, lassitude, and chills; his tongue was furred and white; pulse quick; skin hot; bowels regular. He was ordered to take a saline draught every four hours and was placed on low diet.

22nd.—The bowels were opened three times in the night; stools thin, and of a light-yellow colour; skin moist; tongue covered with a thick, white fur; pulse 108. There was a well-marked rose rash on the abdomen. There was delirium and slight restlessness at night. He was ordered to take six grains of Dover's powder every night.

24th.—Bowels regular, stools solid, but the iliac tenderness was still present. Tongue white in front, dry, and rather brown behind. Fresh rose spots on the abdomen; the old ones were fading. He slept well. To omit the Dover's powder.

26th.—He has passed good nights. Bowels only moved once a day. Tongue red at tip, and edges slightly glazed, being covered with a white fur in the centre. Pulse regular. Skin moist.

31st.—Progressing favorably. Tongue slightly furred; pulse natural; bowels regular; no fresh rash has come out.

February 4th.—Rose spots still visible. He is now convalescent. Ordered a mutton chop.

9th.—The rash had disappeared. He slowly regained his strength, and was discharged cured on March 1st.

ART. 13.—*Typhoid Fever in a Woman aged seventy years.*
By Dr. WILKS, Assistant-Physician to Guy's Hospital, &c.

(*Lancet*, Oct. 19, 1861.)

At a recent meeting of the Pathological Society of London the author exhibited a specimen of intestine with the usual well-known appearances of deposit in the glands of the ileum, which was only interesting in connexion with the age of the patient from whom it came; for it has been agreed by all observers that *typhoid* is more apt to attack the young, whereas *typhus* is more disposed to affect those of more advanced age. Thus, Dr. Tweedie states that it is seldom observed above the age of fifty years. It is probable that a more extended post-mortem examination might show that this statement requires some modification, and that it has arisen from the typhoid form not displaying itself in so marked a manner during life in the aged. Thus, in the present instance the disease would rather have been styled typhus, had not the truth been discovered after death. The woman was nearly seventy, in an extreme state of prostration, and delirious; no diarrhœa, and no rash of any kind; thus, showing that the age and want of power of the patient are not, as was formerly thought, alone instrumental in the production of the mulberry rash. All the circumstances existed which should have determined the typhus rather than the typhoid disease, and yet the latter existed with all its characteristics—a good case in proof of the specific nature of the disease.

ART. 14.—*Typhoid Fever in the Horse, and its relation to Typhoid Fever in Man.* By M. BAILLIE, Veterinary Surgeon in the Artillery Train of the French Imperial Guard.

(*Dublin Hosp. Gaz.*, Aug., 1861.)

The author divides this disease into three forms, the muco-catharrhal, the thoracic, and the abdominal. The first is not very serious, and is what we should designate simple influenza; is never dangerous except when associated with the second form, which is sometimes called typhoid pleuro-pneumonia, and which is also complicated by alteration of the blood. In this case two powerful agents lead to the typhoid state—the alteration of the blood, and the products resulting from the organic lesion of the respiratory apparatus. What is deceptive in these cases is, that there is no loss of appetite at the outset; the cough, the state of the conjunctiva, the acceleration of the respiration, are the first and only signs of the loss of health. The other symptoms are great prostration of strength, fixedness of the eyes, the mucous membrane being of a reddish-yellow colour, petechiæ, dilatation, more or less marked, of the nostrils, stiffness of the whole body, and particularly a weakness of the posterior extremities. This weakness of the loins, the yellow infiltration, and petechiæ on the mucous membrane, are pathognomonic of this disease. The practitioner is also struck by the anxiety of the patient, and the acceleration of the respiration, which is at times jerked, as in broken wind. It is then easy to ascertain, by auscultation, the absence of the respiratory murmur on one or both sides of the lungs. The pulse is small and feeble; the mouth is dry, and emits an offensive smell; there is frequently a yellow, saffron-coloured discharge from the nose; the dung is hard, small, and coated with mucus, and sometimes of a fetid odour. In bad cases the respiration increases from 25 to 30, or even to 60 per minute. The progress of this form of the malady is very rapid, if not prevented at the outset from fixing itself on the organs of respiration. It will speedily run its course and terminate in death, either by disorganization or effusion; not unfrequently these two lesions are found in the same subject.

The third form or abdominal, also called gastro-enteric, or pneumo-hepatic, is the most dangerous. It more closely resembles the typhoid fever of man. The principal lesions are in the mucous membrane of the intestines and the glands of the intestinal tube. The principal symptoms, independent of those in common with the other forms, are signs of colic; the belly is distended, the flank tucked up, the expiration short, extreme prostration, the head down almost to the ground, the eyes glazed, the mucous membrane injected, reddish-yellow in colour, petechiæ, and the scybala coated with a fibro-albuminous substance. In very bad cases the animals move their hind feet frequently, and try to lie down, but if down remain but a short time; at other times they remain immoveable. The pulse becomes feeble, the extremities are alternately hot and cold, the weakness increases, the animal can scarcely stand, and if made to move falls on his knees. In some cases the two forms are so much confounded with

one another that they can hardly be distinguished, and it is difficult to tell which of the two predominates—the pneumonic or the enteritic.

The progress and termination of this form is generally rapid, in some cases lasting only one or two days, and even less. In other cases, though severe, from seven to nine days elapse before death occurs, or, as the author has sometimes seen it, by its termination in cure—in which case, however, the convalescence is generally very long, and great care and attention are required.

Post-mortem appearances.—The lungs are of a reddish colour; their aspect is not that of pneumonia; they are not spotted with black or gray patches, neither are there any abscesses; the more common lesion is that of splenification, not hepatization. In those cases where the malady has assumed the character of pleurisy a quantity of fluid is found in the cavity of the chest—in some cases, as the author asserts, as much as from thirty to forty litres; fibro-albuminous deposits are, however, rarely found in this fluid, neither are those false membranes which in true cases of pleuritis cover the pleura. This is worthy of notice, as it shows the disease to be of a different nature. The pericardium is of a pale colour, it contains always a little effusion; the substance of the heart is soft, pale, and easily divided by the fingers; the coagulum contained in the ventricles is soft and semi-fluid. The blood in the large arterial and venous trunks offers the same characters as that in the cavities of the heart. The nervous system does not present much alteration, except a little effusion occasionally found in the theca of the spinal cord. In the abdominal form the principal lesions are on the mucous membrane of the intestines. The stomach in the majority of cases is empty, but sometimes contains a small quantity of liquid ingesta; the mucous membrane of the left portion is of a grayish colour, presenting numerous small black or red spots; true ecchymoses of various sizes. Sometimes the mucous membrane is thickened, principally towards the pylorus, where it is frequently found studded with small ulcers. In the small intestines there is constantly found a greater or less amount of matter of a dirty-grayish colour; the mucous membrane is more or less thickened, softened, and of a purple-red colour, on which are seen numerous small spots of a black-purple colour. The glands of Peyer are hypertrophied, and form visible *saillies* under the mucous membrane; but the author has never found these follicles ulcerated, but has found them so softened that the slightest pressure of the fingers was sufficient to destroy the mucous membrane covering them. Although the glands of Peyer have not been found ulcerated, the mucous membrane has been observed frequently to be ulcerated in other parts of the intestines, which seemed to have been the result of larger portions having sloughed off, and presenting the appearance of furunculi. These ulcerations are more or less profound, and have a yellow-greenish appearance, with raised edges. Though they in general only affect the mucous membrane, they are not unfrequently deeper seated, and sometimes perforate the intestine. At other times these lesions are absent, and the mucous membrane is only of a grayish-leadén hue throughout its whole extent. The cæcum and colon, in all the forms of this disease, are the seat of

remarkable lesions; they are always distended with gas, and contain some liquid, with a portion of aliment. The mucous membrane presents the same sort of lesions as exist in the small intestines; these vary in number and depth in proportion to the intensity of the malady. It is particularly in this portion of the tube that the redness, the uneven surface, the infiltrations, large ecchymoses, ulcerations, &c., are perceived. The colon is mostly half filled with excremental matters; these are sometimes soft and liquid, at others hard; the mucous membrane is more or less thickened, and of a grayish-leadен, or even black colour; very often large portions of this intestine are ulcerated. In the single colon and rectum the lesions are less perceptible. The alterations in the other organs are all minutely described by the author. Amongst the causes of this disease one of the principal is the assemblage of large numbers of animals in the same locality.

ART. 15.—*On the period of incubation in Smallpox.*

By DR. VON BARENSPRUNG.

(*Annalen des Charites-Krankenh.*, Bd. xix, Heft i; and *Med.-Chir. Rev.*, July, 1861.)

The author in this paper gives the abstract of several cases, showing that in smallpox the interval of time between the infection and the eruption is always the same, even under the most varied circumstances. It is well known that in cases of *inoculation* the local affection began about the fifth day; from the eighth to the ninth the eruptive fever set in; and from the tenth to the eleventh the general eruption. But the action of "*contagion*" has been considered as less uniform, and the period of incubation has been variously estimated by writers. For example, Naumann states it to be three days; Wilson, at from four to twenty days; Canstatt, at from eight to fourteen; Heim, at nine days; Hufeland, at fourteen days; whilst according to Huxham, the eruption may be delayed for a month after the infection. Moreover, whilst fourteen days is considered by most as the medium period of incubation, it is considered that the character of the epidemic, as also the greater or less susceptibility of the patient, may modify it. The cases adduced by the author are certainly remarkable, and have all the character and value of direct experiment; they are as follows:—On the 20th of January, 1851, a female who had never been vaccinated fell ill of confluent smallpox eight days after coming to stay in Halle, in which place, at the time, no cases of this disease existed. She died on the sixth day. On the 27th the body was examined post-mortem by Dr. Meckel, in the presence of several students and medical men; and as a result of the examination, no less than seven persons became ill of the smallpox. Of these, four had been present at the inspection, and three others were persons in close intimacy with those who had been present. In every one of these cases the disease broke out at the same time—namely, between from twelve to thirteen days afterwards.

A brief and condensed summary of these cases will be read with interest.

CASE 1.—A student began to be affected on the evening of the 8th of February; on the day following the fever greatly increased; on the morning of the 11th a roseola on the hands and feet appeared; on the 12th numerous red knots were seen over the whole body, which soon became actual pustules. The patient was well at the end of the month.

CASE 2.—A student felt unwell on the 8th of February, and on the 9th was in a high state of fever. The eruption appeared on the 13th. Termination favorable.

CASE 3.—A student was taken ill on the 9th of the month. The eruptive fever was active, but the pocks only very scanty. Termination favorable.

CASE 4.—A physician was affected with fever during the night between the 8th and 9th of the month. Eruption on the 13th. Termination favorable.

CASE 5.—A student who lived with one of those who had been present at the post-mortem examination, but who was not there himself, being previously in sound health, became ill on the 8th, and on the 10th was in a state of high fever, with headache. Two days later the pocks broke out. Termination favorable. He had been vaccinated.

CASE 6.—A physician who was present at the inspection had carried home a piece of the skin affected with the disease for examination. He remained unaffected himself, but his wife, who was pregnant, and who had been vaccinated in her youth, *and only a year previously, with good results*, began on the 8th of the month; day following, high fever. On the 10th delirium; on the 11th a scarlatina-like rash on the skin, delirium at evening; and on the 12th she was prematurely confined. On the 13th, remission of fever and lessening of the skin affection. The child lived fourteen days, and was unaffected by the disease.

CASE 7.—Was the child of the attendant at the post-mortem examination, who had sewn up and washed the body. It had not been vaccinated, and although its father and mother remained unaffected, fell ill on the 8th of February; on the 11th the eruption began, and on the 12th the whole body was covered. It died on the 14th with pulmonary symptoms.

Such are the various cases related by the author, which are so uniform in their nature and occurred under circumstances so favorable to precise and scientific observation as to afford material for most trustworthy and valuable deduction. As he remarks, it is not a little remarkable that seven people, so differently circumstanced and predisposed, some being vaccinated, others not so; some being adults, others children; some male, and others female; should, in spite of these differences, be all affected at the same period after exposure to contagion (and this notwithstanding that the intensity of the contagious influence was very unequal), for in every case the outbreak was between the thirteenth and fourteenth day after. The development of the skin inflammation in the numerous cases was less uniform.

The author closes by relating one or two other cases which completely support the above observations, and which occurred under his own immediate notice in 1858.

ART. 16.—*Prevention of pitting in Smallpox.*

By Dr. JOSEPH BELL, Physician to the Glasgow Royal Infirmary.

(Glasgow Medical Journal, June, 1861.)

The treatment recommended is simply that so often used in the case of burns—namely, the application of cotton wool soaked in Linimentum Aquæ Calcis. Dr. Bell says:—"I applied it in several cases of confluent smallpox which were under treatment in the infirmary, immediately before the termination of my duties as physician to the fever hospital in 1854, and the result was so successful that, on my reappointment in 1858, I employed it in every case of confluent smallpox with decided success. In some of the most severe cases of the disease not a single pit was found to have been formed on the parts to which it was applied. At the point of the nose and around the mouth, where the patients contrived always to remove the dressing to some extent, numerous deep pits took place, and contrasted strongly with the uniform smoothness of the cheeks and other parts, over which the dressing was permitted to remain undisturbed. But, besides the effectual prevention of pitting, the dressing secured another important result—it *prevented the swelling of the face*. This effect was most marked. In the severest confluent cases, if applied early, the swelling never attained any great extent; and in cases in which great swelling had occurred prior to admission, the tumefaction of face soon subsided after the use of the dressing. The febrile symptoms became considerably mitigated after its application; indeed this effect was so striking that I have been induced to regard the swelling of the integuments of the face and scalp as being in a great measure the cause of the high febrile excitement which continues to exist in the confluent form of the disease; but whether or not, I state the fact that in cases of severe confluent smallpox in which the application was employed the swelling of the face, and also the febrile excitement, were so slight as to arrest the attention in the most decided manner."

The Linimentum Aquæ Calcis should be poured on a plate; then masses of cotton wool, answering in size and shape to the parts to which the dressing is to be used, should be dipped in the liniment, and applied in such a manner as to completely cover the face and neck, leaving apertures over eyes, nostrils, and mouth. The cotton should be closely matted together, so as to allow no crevice to exist, and a large handkerchief should be tied over all, having holes cut in it, so as to correspond with the apertures over eyes, nostrils, and mouth. The dressing should be allowed to remain until convalescence, and if it becomes accidentally detached at any part it should be immediately renewed.

ART. 17.—*On the identity of Cow-pox and Smallpox.*

By Dr. ANTHONY VON IFFLAND, of Grosse Island.

(British American Journal of Medicine, Sept., 1861.)

"About six weeks since," writes Dr. von Iffland, "we had in the hospital a large number of cases of smallpox among the Germans

and Poles, with many of a confluent character, but in consequence of the salubrity of the island, and the excellent ventilation which the locality which the Smallpox Hospital affords, nearly all recovered (the four deaths having occurred among young children), while the patients, from time to time, were allowed, at an early convalescence, to walk about and sit within the prescribed limits of the hospital. A few of these patients having, however, wandered as far as the grounds in which the cows sometimes grazed, my cow, being one of the number, was milked by some of the patients whose fingers were still covered with smallpox crust, and as her teats had already suffered from the stings of musquitoes or small black flies, the smallpox virus was readily communicated, and in a few days produced all the characteristic pustules. The girl who milked her had neither been vaccinated, nor had had the natural smallpox, and in a few days her hands were covered with pustules bearing great similarity to those of natural smallpox, but otherwise with no constitutional disturbance. The teats of other cows on the island were also similarly affected. My servant girl, although much exposed to contract smallpox from her frequent intercourse with the patients, in distributing comforts to the children in hospital, had, up to this period (15th August), borne perfect immunity from any attack. The others, who also milked the cows with pustules on their teats, had merely small sores on their hands; they were very young girls, and had been vaccinated at a very early age."

ART. 18.—*On Scarlatinal Albuminuria and its treatment by Quinine.*
By Dr. HAMBURGER.

(*Archiv. Gén. de Méd.*, April, 1861; and *Méd.-Chir. Rev.*, July, 1861.)

In his communication the author confines himself almost entirely to the treatment which, in his experience, has proved most successful. Premising that in scarlet fever the albumen can be considered neither as the result of excessive susceptibility of the skin to cold, &c., nor to any alteration in the mass of the blood allowing of transudation from the vessels, nor indeed as a secondary phenomenon whatever, he attributes it solely to the localization of the virus upon the kidneys, the dropsy being a manifestation or expression of the specific affection, analogous to the primary effect of the virus upon the throat or the skin. As respects the treatment, the author inveighs strongly against the use of digitalis, which diminishes the urine and renders it bloody, and increases local effusion; and also against diuretic remedies, even the mildest; and thinks that vinegar, so useful in Bright's disease, as also mineral acids and hot baths, are useless. The remedy which he has found above all others of service is quinine. Under its use the fever diminishes, the urine is rendered more abundant and less bloody, and the appetite and general power increased. The amount of albumen does not, however, diminish. This remedy was used in 47 severe cases; in 44 cases improvement was at once or very speedily manifested; in 3 cases only was there absence of result, good or bad, but these recovered. When employed in chronic cases, improvement follows the first doses almost immediately—most quickly in adults. In acute cases the quinine must not be at once administered. The dose

should be, to infants, from eight to ten centigrammes a day, and to adults from fifteen to twenty. Its bitterness has alone prevented him from trying it as a prophylactic after the early period of scarlet fever. During the use of the remedy the diet ought to be antiphlogistic, and confined to fluids. An interesting case is quoted at length, showing the value of quinine in a subacute case, in a child.

ART. 19.—*On the use of ardent spirits in the treatment of Intermittent Fevers.* By (1) M. HÉRARD and (2) M. LERICHE.

(*Gaz. des Hôpitaux*, July 27, 1861; and *Gaz. Hebdom. de Méd. et Chir.*, Aug. 10, 1861.)

1. M. Hérard has lately employed *rum* in the treatment of two cases of intermittent fever in the Hôtel Dieu, after the plan recommended by M. Jules Guyot.

The first of these patients was a woman, æt. 28, who had long inhabited a notorious ague district, and had experienced aguish symptoms, which, two or three months previous to her admission to the hospital, assumed the type of a genuine tertian intermittent. At the time that she entered the hospital she presented the peculiar cachectic aspect of ague; her spleen was hypertrophied, so as to extend three or four fingers' breadth beyond the border of the false ribs. She suffered from great depression, loss of appetite, headache, &c.

During the first week of her residence in the hospital nothing was done in the way of treatment beyond the administration of an emetic. The ague showed no signs of decreasing. The next time that the shivering commenced a *petit-verre* of rum was administered, the patient being kept in ignorance of the nature of the remedy; and although totally unaccustomed to the use of alcoholic drinks, she expressed herself as feeling greatly comforted, and the cold fit was very much shortened. On the following day the general sense of *malaise* seemed very much relieved, and the ague fits never returned. The cachectic complexion became soon exchanged for that of health, and the spleen resumed its natural size, though these effects, latterly, were doubtless aided by the administration of steel and a little quinine, to which remedies, however, it was evident that the amendment was not *principally* due. One single dose of the alcoholic drink, without any assistance from other remedies, seems to have stopped the ague fits once for all.

In the other case, that of a young man, æt. 25, the subject of former repeated attacks of ague, which at the time of his admission to the Hôtel Dieu, had assumed the type of a very severe tertian, the cure was not quite accomplished by the first dose, but on the second use of the rum the ague fits entirely ceased, and have not returned.

M. Hérard, in some clinical remarks, expressed his reliance on the treatment recommended by M. Guyot, and carried out in the above cases. In justification of this confidence he cited not only the authority of M. Guyot, but the experience of the inhabitants of Algeria and of certain parts of South America, where ague is endemic, as also of the *ouvriers* employed in making the central railway of France, which traverses a district perpetually haunted by the marsh poison. These

latter have learned by experience that, during the state of partial vinous intoxication which they are apt to get into on *pay days*, they may commit with impunity obvious excesses which at other times would inevitably induce an attack of ague.

2. M. Leriche has employed the same treatment in thirteen cases of certain ague with very different results. The spirit was taken pure, without sugar and without spice. The dose was ninety grammes, sixty at the moment of the rigor, and the remaining thirty five minutes afterwards. Three of the patients carried out this plan of treatment in three, five in four, and five in five paroxysms. In six of the number the cold stage and also the hot were somewhat shortened, the former never lasting longer than half an hour. In four there had been a previous attack of fever, in the remaining nine there had been no such attack. In no instance was the malady cured.

ART. 20.—*On Fever in the Zambesi.* By Dr. LIVINGSTONE.

(*Proceedings of the Epidemiological Society, Lancet, Aug. 24, 1861.*)

Dr. Livingstone's remarks are in the form of a note to Dr. M'William.

"In the typical cases given in Dr. M'William's '*Medical History of the Niger Expedition*' the gall-bladder was found distended with black bile; and, if my memory does not deceive me, most of the cases treated with quinine at an early period of the disease either recovered or were subjected to the milder or intermittent form of fever.

"In 1850 I adopted the plan of giving quinine mixed with a purgative as the first step of the treatment, and was successful in the cases of two of my own children and an English party whom we found at Lake Ngami, and of whom one had died before our arrival. I have lost the notes of my reasons for adopting the practice, but I have been successful in every case I have met with since. The prescription employed is—Resin, jalap, and calomel, of each eight grains; quinine and rhubarb, of each four grains; mix well together, and when required make into pills with spirit of cardamoms: dose, from ten to twenty grains.* The violent headache, pains in the back, &c., are all relieved in from four to six hours; and with the operation of the medicine there is an enormous discharge of black bile—the patient frequently calls it blood. If the operation is delayed, a dessert-spoonful of salt promotes the action. Quinine is then given till the ears ring, &c. We have tried to substitute other purgatives instead of the resin, jalap, and calomel, but our experiments have only produced the conviction that aught else is mere trifling. No strength is lost in our march up the river of six hundred miles on foot. A European would be stricken down one day, and the next, after the operation of the remedy, would resume his march on foot. In some very severe attacks it was necessary for the patient to travel upon a donkey, but after two or three days he would prefer to tramp it.

* Since the paper was read Dr. M'William has received through the Foreign Office the following amended formula of Dr. Livingstone's prescription—viz.: "Take of resin, of jalap, and of rhubarb, six or eight grains; of calomel and quinine, four grains each; mix well in a mortar, and preserve for use. (The rest is correct.)"

"We tried Warburg's tincture, which has a great reputation in India, but it causes profuse sweating, and does not cure the disease; the strength is also impaired. We had a good supply, by the kindness of one of our nobility, but I am compelled to say that it did not answer our expectations. The daily use of quinine is no preventive. We have seen many cases occur when the person was on the verge of cinchonism.

"I employed the foregoing remedy with success on the west coast, but made no fuss about it more than make a general statement in the 'Missionary Travels.' I was not quite sure that our fever was identical with that Dr. McWilliam encountered in the Niger, but the melancholy fate of a party of missionaries at Lunyanti, where six out of nine Europeans and four native attendants perished in the space of three months, makes me fear that it is the same complaint as that which destroyed the officers of Commodore Owen in the Zambesi, those of Captain Tuckey in the Congo, and the crews of the great Niger Expedition in that river. My companions, Dr. Kirk and Mr. C. Livingstone, entertain the same opinion of the value of our pills as I do. We wrote a paper for one of the medical journals. But the above sad case makes us anxious that the remedy should become more extensively known than it has been, and I do not know a better plan for effecting this than by communicating it to Dr. McWilliam.

"Those who may try the remedy will do well to remember that the above doses are for strong adults.

"I cured myself and native companions in this way during my long journeys between 1852 and 1856, and that the remedy has no bad effect on the system may be inferred from the fact that I have had no regular attack of fever since my return. I have had little illnesses, probably from exposure to malaria in its most intense forms, but nothing like what I formerly experienced; and I am of opinion that, what we were all taught, not to give quinine till we had used the preliminary measure of relieving the bowels, was a mistake.

"Query—Might the remedy not be applied to some of the fevers at home that arise in unhealthy localities? Around every village in this country there is a very large collection of human ordure during the dry season; this is swept into the rivers by the heavy rains, and you may guess the effect from hundreds of thousands of villages. The natives here do not drink it, as the natives do on the banks of the Thames, but make holes in the sand to draw from. Possibly this has as much to do with the origin of fever as it has at home.

"DAVID LIVINGSTONE.

"TETTE; 28th November, 1860.

"I give a specimen of the difference between dry and wet bulb, Victoria Falls, 24th September, 1860.

In shade, 9 a.m.	{ Air 87°0 Wet bulb... 59°0 }	Difference, 23°.
" 12 "	{ Air 96°5 Wet blub... 63°0 }	Difference, 33°5.
" 3 p.m.	{ Air 96°0 Wet bulb— 60°0 }	Difference, 36°0. Once the difference was 40°0.

"The greatest difference, Dr. McWilliam observes, was, I believe, 16°; generally it was 6° or 7°." D. L.

"The temperature of the dew point in the three observations respectively are, according to the formula of Glaisher, 42°, 50°·2, and 54°." [J. O. M^cW.]

ART. 21.—*On the treatment of Incipient Cholera.* By Dr. JOHN MURRAY, Deputy-Inspector-General of Hospitals, Agra Circle.

(*Indian Annals of Med. Science*, No. xiv, 1861.)

In an excellent report on the attack of epidemic cholera in Agra and central India, during the year 1860, Dr. Murray says, "Various remedies were used in the treatment of the disease, with advantage in the earlier stages, which were powerless after collapse had supervened. The remedy most generally used, from being convenient for distribution, was the old cholera pill, composed of *opium*, *black pepper*, and *assafetida*." And in another place he mentions an amusing mistake occurring in the fort at Agra, which, as it was followed with good results, was taken advantage of at Muttra. "On the appearance of the first case in the fort the cholera pills were served out with the usual instructions—a pill to be given to every man *whose bowels were opened during the night*, and if they were opened a second time another pill, and the patient to be immediately brought into hospital. On asking the serjeant-major next morning how many pills had been expended, he replied that they had all been used, *that he had served them out to each man with his grog*. This created a general laugh at the station, but there was not another case of *cholera* at the fort for a fortnight. I told the story to the artillery-men at Muttra. The troop had been decimated by the disease during the previous five days. They took the pills with their grog, laughing, and had no fresh case that night, and only one fatal case afterwards. They had moved into camp that afternoon."

ART. 22.—*A statistical account of 476 cases of Acute Rheumatism admitted into the wards of the Middlesex Hospital during the years 1853-59.* By Mr. BERRY, late Registrar of the Middlesex Hospital.

(*Med.-Chir. Rev.*, July, 1861.)

There is much interesting information in this account. In the first place, we find that more than one-half, or about 53·7 per cent., suffered from heart-complication, of one kind or another (recent, not old-standing), and that women suffered in a much greater proportion than men, the per-centage among the women being 62·2, among the men 45·3. In the 476 cases endocarditis occurred in 138, endo-pericarditis in 71, simple pericarditis in 35, and endo-pericarditis with pleurisy in 9. The cardiac complication occurred as early as the second, and as late as the twenty-seventh day of the disease, and the liability was at its maximum during the first thirteen days. Rather more than 14 per cent. had relatives subject to rheu-

matism, and the predisposition seemed to be more distinctly traceable to the father than to the mother. Nearly 50 per cent. (207) had suffered from previous attacks, and of these 136 had had one attack, 25 two, 17 three, 8 four, 1 five, 1 six, 1 nine, 1 ten, and 17 several. As a rule, the disease commenced in the lower extremity and travelled upwards with a certain regularity. The joints of both extremities were affected in 323 out of the 476, those of the upper extremity alone in 51, those of the lower extremity alone in exactly twice as many, namely 102. Speaking of the duration of the attack, Mr. Bury says :

"Though our records, from obvious reasons, do not afford us any precise information on this point—one, it is imagined, of the least importance in the consideration of the disease—yet it is believed that the average length of time patients attacked with acute rheumatism remained in the hospital comes to much the same thing. For while, on the one hand, must be allowed the period of illness which elapsed previous to the patient's admission; still, on the other, must be deducted the time the patient remained after all rheumatic symptoms had disappeared, and during which he only lingered to regain sufficient strength to justify his leaving.

"These two periods, it is believed, would mutually compensate, and the average length of stay—forty-nine days—of rheumatic patients, may be considered as fairly representing the duration of an attack of acute rheumatism."

ART. 23.—*On the treatment of Acute Rheumatism by Actæa Racemosa.*
By Dr. F. R. MACDONALD, of Inverary.

(*Edinburgh Medical Journal*, Aug., 1861.)

This remedy (belonging to the N. O. Ranunculaceæ) was brought under Dr. McDonald's notice two years ago by Dr. Varis, of New Rochelle, near New York. "I have used it since," says our author, "in all the cases that have come under my notice. I was at first disposed to ascribe its beneficial effects less to its own virtues than to that coincidence of favorable circumstances which has frequently been observed to attend the use of a new medicine. Its uniform success has induced me to alter this opinion; and I believe that a similar success will be found to attend its employment in the vast majority of cases of acute rheumatism.

"I have employed the Actea with equal benefit in all the acute forms of rheumatism. In the subacute variety it acts with remarkable readiness. There are not a few persons to be met with, either of a favouring diathesis, or living in rainy districts, who, in consequence of such an exposure as would elsewhere or otherwise lead to no greater inconvenience than a slight cold, are suddenly seized with rheumatic pains. In these cases the Actea is alike expeditious and satisfactory. But it is in the severest forms that its beneficial effects are best seen. Two well-developed cases came under my observation at the same time in last spring—one in a boy of nine, and the other in a man of forty. My supply of the Actea being exhausted, I was

obliged to have recourse to the ancient treatment. In neither case did the disorder yield until the *Actea* had been given. The dose that I give varies from twenty-five to forty drops, administered three times a day.

"The tincture of the *Actea racemosa* may be had of Messrs. Duncan and Flockhart, of Edinburgh, at 6*d.* per ounce."

(C) CHRONIC DISEASES.

ART. 24.—*On the treatment of Ague by Arsenic.* By Dr. ———

(*Medical Times and Gazette*, Oct. 5, 1861.)

M. Sistach, Physician to the Military Hospital of Vincennes, has recently made a number of trials with arsenic in ague, and has come to the following results concerning the value of this treatment :

Arsenic is a powerful febrifuge in recent cases as well as in such of long standing, and which are continually kept up by a paludal cachexy. It acts more rapidly in tertian than in quotidian fever, and it has an evident influence upon tumours of the spleen. Its effect is, however, dependent upon the pharmaceutical quality of the preparation, and upon the dose of the remedy. To be innocuous, the entire dose of the arsenical preparation to be given must be divided in a peculiar manner ; due regard must be had to the constitution of the patient, and the dose must be diminished as soon as the paroxysm is suppressed.

M. Sistach has treated 150 cases of ague with arsenic, of which 53 were cases of quotidian, 94 of tertian, and 3 of double tertian fever ; 50 of them were quite recent, 100 of long standing. Some of the patients had made the late campaign in Italy. The results of the treatment were as follows :—86 patients had no further paroxysm after the first dose, 73 had one, 25 two, and 6 three more paroxysms. There were 22 relapses, of which 9 belonged to the tertian and 13 to the quotidian type, 8 being of recent date and 14 of long standing.

As to the form in which arsenic should be administered, M. Sistach recommends to use it in solution, because thereby the absorption and division is facilitated, and he prefers M. Boudin's solution to all others. This is prepared in the following manner :—One gramme (about 16 grains) of white arsenic is boiled with one litre of distilled water in a porcelain saucepan until the arsenic is entirely dissolved ; the solution is then allowed to cool, is percolated, and the loss of water by evaporation is compensated by a fresh addition of distilled water to it ; the whole is then well mixed with one litre of white wine. This *Liquor Arsenicalis Boudini* contains five centigrammes of arsenious acid in 100 grammes of fluid (1 part of arsenic to 2000 parts of liquid). Of this preparation, 60 grammes (2 ounces) are at first given per diem, and as soon as the paroxysm is suppressed only 30 or 40 grammes should be given per diem, and the treatment be concluded with 20 grammes per diem. These total doses have to be divided into 4 parts, the first of which is taken at 6 a.m., the second at 8 a.m., the

third at 2 p.m., and the last at 8 p.m. If thus administered, the remedy causes neither vomiting, colics, nor diarrhœa, nor does it exert any influence on the pulse and the temperature of the body. M. Sistach has observed that, as long as the fever was not quite gone, the remedy agrees very well with the patient at any hour, provided the dose be sufficiently small, and the appetite may even increase under its influence; but if the fever is suppressed, the smallest dose will disturb the appetite if taken directly after a meal. In every case the treatment was commenced with an emetic if the stomach was out of order, and if, when the treatment had been concluded, the appetite did not return, the same was done, after which a generous diet could be allowed.

ART. 25.—On the use of Arsenical Baths in the treatment of Rheumatic Gout. By M. GUENEAU DE MUSSY.

(*Gaz. des Hôpitaux*, Aout 10, 1861.)

At a recent meeting of the Academy of Medicine at Paris, M. Gueneau de Mussy read a paper on the use of arsenical baths in the treatment of rheumatic gout.

The author divides patients affected with rheumatic gout into two categories.

In some the morbid process is obviously chronic; in others the disease is more recent, the active phenomena more distinct, nervous excitability is highly developed, or indeed the disease, although of very long standing, belongs to that species of chronic affections which seem to consist of a protracted series of more or less acute attacks, chronic by the obstinacy of the morbid process, acute by the form it assumes.

In the first case, when chronicity is clearly established, M. Gueneau de Mussy uses the following mixture for a full bath:

Carbonate of soda	. . .	3¼ oz.
Arseniate of soda	. . .	15 gr.

He rapidly increases the amount of arseniate to 30 gr., which he rarely exceeds.

In the second case, if the effects of previous stimulation are to be apprehended, he uses arseniate of soda alone at the dose of from 15 to 45 gr. in a common or a gelatinous bath.

This treatment has produced the following effects: in several instances the patients have, during the first baths, complained of pain in the diseased joints; almost all have experienced, on leaving the bath, an unaccustomed feeling of relief, of comfort, and aptitude for locomotion.

In some few, after the first baths, diarrhœa or nausea ensued. Others manifested phenomena of transient excitement, agitation, and sleeplessness. These symptoms were more marked when the baths contained carbonate of soda; and in some patients a cutaneous congestion was observed, characterised by erythematous eruptions.

No trace of arsenic was ever detected in the urine.

In the early stages of this medication a bath every alternate day, and subsequently a bath every day, with occasionally a day's rest, was prescribed.

The duration of the treatment was subordinate to the effects produced. One of the patients took as many as sixty baths.

Concomitantly with the arsenical baths, M. Gueneau de Mussy exhibited a decoction of guaiacum and a mixture containing from 10 to 15 gr. of extract of cinchona, and from 5 to 15 gr. of iodide of potassium. The author observes that this mixture, used alone for fifteen years, had given no beneficial result.

M. Gueneau de Mussy has also successfully tested this treatment in all forms of chronic rheumatism, in various species of neuralgia, in a case of rheumatic paraplegia, and in certain chronic affections of the skin.

ART. 26.—*A case of Chronic Farcy in Man terminating favorably.*

By M. BOURDON, Physician to the Hôpital Lariboisière.

(*Journ. de Mët. et Chir. pratiq.*, Aug., 1861.)

This case was taken down with extreme care. We purposely use the expression *with extreme care*, because a cure of this disease in the human subject is so excessively unfrequent that it is, above all, necessary to establish the diagnosis beyond dispute. In this respect, M. Bourdon's case is perfect.

CASE.—The patient was a stable-man, and what is worse, a stable-man employed in an establishment for the removal of furniture, in which the horses are more exposed than elsewhere to glanders and farcy. During twenty or twenty-five days before the breaking out of the disease this man's duty consisted in grooming an unquestionably glandered horse, and he had entirely omitted the attention to cleanliness which such duties render imperative. He suddenly was seized with shivering, violent headache, epigastric tenderness, nausea, and excruciating pain, especially in the lower extremities. Numerous abscesses then appeared in succession, some in the muscles, others under the skin, and presented at once distinct fluctuation without any sign of inflammation of the surrounding parts. Some of these tumours remained fistular, others filled again several times after the first evacuation of their contents, and closed again rapidly. Very obstinate articular suffering was also complained of. Subsequently stuffing of the nose, together with frequent hawking, was observed, followed by the exspuition of thick and bloody mucus evidently emanating from the nasal cavities. At last a grayish sore was detected on the septum, and gradual destruction of the Schneiderian membrane and of the adjacent cellular structure took place, which finally exposed the cartilage.

For a certain time the patient was exhausted by suffering, want of sleep, and suppuration; but gradually he recovered his strength under the influence of invigorating diet; the abscesses closed, the ulcer within the nose healed, and a complete cure was effected.

M. Bourdon adopted the idea of chronic farcy only after having established a careful comparison between the case and all the diseases to which it

might be conceived to bear any resemblance, such as spontaneous puriform diathesis, ozæna, tubercular disease of the nasal fossæ, syphilis, and scrofula.

M. Bouley, after a close appreciation of M. Bourdon's line of argument, entirely agreed with him as to the presence of chronic farcy in this case. Some of the symptoms of the complaint, said the learned reporter, failed, it is true, to make their appearance; for instance, the destruction of the palate, the ulceration of the pharynx, the perforation of the septum, but this he conceives to be due to a peculiar power of resistance in the patient's constitution, which enabled him to contend with, and ultimately to conquer, the effects of the virus.

Dr. Bourdon's patient has recovered, and this appears the leading point of interest in the case. It now remains to be discovered whether the cure was due to the man's vigorous nature or to the treatment which was instituted.

The latter consisted, in the incipient stage of the complaint, in venesection, abstinence from food, diluent drinks, aperients and antimonials; somewhat later, in the exhibition of tonics, such as cinchona bark, claret, and generous diet; and subsequently, when no further doubt was entertained as to diagnosis, M. Bourdon prescribed two grains of iodide of sulphur daily, tonics, and sulphurous baths. The local remedies were incision of the abscesses, blisters over the surface of the painful joints, and cauterization of the nasal fossæ with tincture of iodine at first, and afterwards with lunar caustic.

An incident, which we find noted in the record of the case seems to favour the idea of the beneficial action of the iodide of sulphur; gastric disturbance, perhaps occasioned by the medicine, caused it to be discontinued, and the symptoms of the general disease immediately acquired a more unfavorable aspect; but as soon as the remedy was resumed the improvement again set in, and persevered until a complete cure was effected. M. Bourdon also invites attention to another circumstance, viz., that the patient was placed in a ward so actively ventilated by blowers, that each of the inmates receives no less than 134 cubic yards of fresh air every hour. Now, if it is true that insufficient ventilation, coupled with crowding, is one of the most active generating causes of glanders in the soliped, the utility of so free an admission of fresh air must be obvious. Perhaps, therefore, M. Bourdon's case might be explained by mere coincidence; but were we even to admit that the patient recovered in spite of the treatment instituted, the promulgation of another instance of the transmission of glanders from the horse to the human subject will still prove useful, if it inspires a salutary dread to all persons who have the care of horses.

ART. 27.—*On Heredito-syphilitic Struma, and on the teeth as a means of diagnosis.* By MR. J. HUTCHINSON, Assistant-Surgeon to the London Hospital, &c.

(*British Med. Journal*, May 18, 1861.)

"On going through Sophia Ward on Monday last," says Mr. Hutchinson, in a clinical lecture, "our attention was drawn to the case of a little girl who is suffering from a large ulcer on the front of her leg.

"Sarah W—is a child of fairly healthy aspect, aged 11. The disease for which she is under treatment is a large oval ulcer on the front of

her right leg, which has laid bare about two inches of her tibia. The ulceration has evidently been, indeed it still is, of the type of chronic phagedena. The edges are undermined; they present a livid or gray surface, and are destitute of granulations. A week ago, Mr. Powell, at my request, applied the strong nitric acid to certain parts of the edge, where the ulceration was most inclined to spread, and with decidedly good effect; although the sore did not take on healthy action.

"On two occasions, as you are aware, we had passed this child without arriving at anything definite as to the diagnosis of her affection. On Monday, however, my attention was drawn to the very unusual features which the ulcer presents; and the question suggested itself to my mind—Could it depend upon an inherited taint of syphilis? Following up this idea, we looked at her teeth, and found that her upper incisors were of a very peculiar shape, and, in fact, of the type most characteristic of the taint in question. We learnt, on inquiry, that she is the eldest, and, indeed, the only living child, of her parents. Her mother is stated to have had several others, but they are all dead. Further than this we had no opportunity for pursuing the family history, as neither her father nor mother was present.

"On looking into her throat, we found that her uvula and soft palate had been extensively destroyed by ulceration; a condition of things which, I need not say, strongly confirmed my opinion. These discoveries at once changed my view of the case; and, instead of considering it as simply a disease of debility, I regarded it as one of specific taint to be treated by specific remedies. The quinine and cod-liver oil which she had been taking were discontinued, and iodide of potassium in full doses was prescribed. The result of this change was that, in a few days, the edges of the sore have assumed a freely granulating condition.

"In this instance the usefulness of the teeth as a means of diagnosis was very forcibly illustrated. Usually, the subjects of inherited syphilis display in their physiognomy peculiarities sufficiently well marked to lead, if not to a positive opinion, at least to a strong suspicion. They show, in nine cases out of ten, a very pasty, pallid skin, and a drawn, haggard expression of face, as of premature old age. The bridge of the nose is almost always sunken and broad, and there are frequently little pits or cicatrices about the cheeks and forehead, and symmetrical linear scars extending from the angles of the mouth.

"In Abigail Hammond, a girl who occupies a bed in the next ward, suffering from disease of the knee-joint, all these peculiarities are very noticeable; and the *tout ensemble* of her visage would attract the attention of even a careless observer. She has also suffered from interstitial keratitis, which has left both her corneæ hazy; whilst both pupils are notched and irregular, from the effects of a bygone attack of iritis.

"Sarah W—, however, although not robust-looking, does not differ materially in appearance from hundreds of other children of her age. We had, as I have said, prescribed for her on two occasions without suspecting the true nature of her disease. It was her teeth, and her teeth only, which led me to give a confident opinion as to her diathesis,

and to alter the treatment of her case. Now, however, that we have gained this knowledge, it is easy to see that there are suspicious features in the ulcer itself. Notice the surface of the exposed bone. Instead of being smooth and even as that of a healthy tibia should be, it is raised, worm-eaten, and like pumice-stone, remarkably resembling what we often see on the skull when exposed by the ulceration of a syphilitic node. It is clear that the disease has begun in chronic periostitis, and that thickening of the exterior of the bone has preceded the phagedenic ulceration by which the surface has been exposed.

"We will, however, for the present, restrict our attention to the teeth as a means of diagnosis of hereditary taint. On this important symptom, I will offer for your guidance the following observations:

"1. Remember that it is the permanent set only which show any peculiarities. The milk teeth of syphilitic infants, although liable to premature caries, show no peculiarities of form.

"2. *The central upper incisors are the test-teeth.* You may neglect all the others; for, although malformations are often observed in them also, as, for instance, a rounded peg-like form in the lower incisors, yet there is nothing that is trustworthy, and much that is liable to mislead. Look at once at the two upper central incisors; and if they be broad, well-made teeth, you may throw away suspicion as far as dental indications are concerned.

"3. The peculiarities of the central upper incisors which denote hereditary syphilis are well shown in the two patients to whom I have referred, and in the sketches which I now exhibit. The teeth are short and narrow. Instead of becoming wider as they descend from the gum, they are narrower at their free edges than at their crowns, their angles having been, as it were, rounded off. In the centre of their free edge is a deep vertical notch, made by the breaking away or non-development of the middle lobe of the tooth-crown. This notch, taken together with the narrowness and shortness of the tooth, is the main peculiarity; but you will observe also that the colour of these teeth is not good. Instead of looking like ivory with a thin coating of pearl, they present a semi-translucent appearance, not unlike that of bad size, as we see it displayed in the oilmen's shops.

"In respect to the value of this symptom, I may express the utmost confidence in it. I frequently see sets of teeth so characteristic that, without asking for any other knowledge, I would venture a positive opinion as to their possessor having suffered in infancy from inherited syphilis. In the majority, of course, the peculiar features are less well marked, and furnish only one among many symptoms on which to base a diagnosis. It is only by long practice in the observation of the malformations of teeth, that dexterity in using them as means of diagnosis can be obtained. You must at first exercise the utmost caution, or you may be misled into great errors. Remember that it is not all irregular or misshapen teeth which indicate hereditary syphilis. *The commoner and more conspicuous varieties of malformation have, indeed, nothing to do with that disease.* Craggy or 'rocky' teeth are not syphilitic; 'honey-combed' teeth (eaten into little pits on their surfaces) are not syphilitic; as a rough rule, teeth which are much broken have nothing to do with the syphilitic type. Whenever you

see a whole row of front teeth marked by a horizontal line or furrow, which crosses them midway between the neck and the edge (or nearer to the latter), and at the same level on all, you may, for the most part, dismiss the suspicion of syphilis. It is the notching and dwarfing of the upper central incisors which constitutes the only condition to which suspicion ought to attach. As I have stated, this condition is as compared with certain others ('honey-combed,' 'rocky teeth,' &c.), but rarely met with. The great usefulness of this symptom consists in the fact that it is objective and indelible. You need ask no questions, but have simply to observe and draw your own conclusions. In many, indeed in a majority, of the cases in which hereditary syphilis is suspected, you are precluded, by the fear of causing family mistrust, from putting any direct questions. In most instances, the taint has been derived from the father, who had suffered from syphilis before marriage. The mother of the child is not unfrequently in entire ignorance of the nature of its malady; and it would be unkind and very wrong to excite her suspicions. In seeking for corroborative testimony, after having inspected the teeth, you will proceed with great circumspection. It is a good plan to ask if the child suffered much when cutting its first teeth, if measles, scarlet fever, &c., occurred in infancy. Such questions will generally elicit what you want to know, without conveying any hint whatever as to your own view of the case. If you are told that when a baby the child was very ailing and puny, suffered from rash, had 'thrush' badly, and was much troubled with snuffles, it will not be needful to push the investigation much further. You may ask if the 'thrush went through it;' and the answer you will receive will often inform you as to whether the child had condylomata at the anus. The children who suffer severely from hereditary syphilis are usually the eldest in the family. Almost always those who present well-characterised teeth are the eldest living. Very often there have been either stillbirths, or several have died in infancy, who, if they had lived, would have been older than the patient; but still, almost always, the latter is the oldest living. This circumstance is, of course, easily explained by reference to the fact that the parental taint has usually been acquired before marriage, and is, with the lapse of years, gradually wearing out. I have, in many instances, found the eldest child of a syphilitic family with notched teeth and senile physiognomy; the second child presenting similar features in a less marked degree; the third less still; and the fourth or fifth appearing to be in good health, and free from any peculiarity either in teeth or features.

"That the syphilitic taint existing in the parents is peculiarly fatal to the life of the offspring is an undoubted fact. In many cases a syphilitic husband is not fecund, and no conceptions occur. In others two or three miscarriages happen soon after marriage, and then the woman ceases to conceive; whilst in others, and the larger proportion, a succession either of premature births, or of tainted infants destined to die within a few months, occurs. The number of infants inheriting the syphilitic taint in a severe form who are ultimately reared is, I suspect, but small. I shall bring before you this afternoon three patients, the undoubted subjects of inherited syphilis, and you will

notice that in each instance the patient is an only child. All of them are girls, another fact worthy of notice. To whatever cause it may be assigned, there is no doubt that a larger proportion of our patients with this form of disease are females. I suspect that this is so because a larger number of male conceptions end in abortion.

"I will now ask your attention to the case of Ann Inkpenn, a little girl aged seven, whom we admitted yesterday. She comes on account of angular curvature of the dorsal spine, attended with iliac abscess, which has opened in the right groin. Her physiognomy is markedly syphilitic, the skin being thick and sallow, the bridge of the nose flat, and the lips puckered by cicatrices. She has as yet not cut any of her permanent teeth. Let us look at the state of things in her mouth. You will observe that she has lost all her upper incisors and her two lower central ones; the gums are quite sound, and look as if the teeth had been out for long, and her mother tells me that it is more than four years since they fell. I told you just now that the milk-teeth are not affected, as regards their form, by hereditary syphilis, but that they are liable to premature caries. This early caries, I may add, usually affects the upper incisors; that is, the same teeth which, in the permanent set, show the most characteristic deviations from the normal form. It is very common, indeed, for these patients to lose their front teeth several years before those of the second set appear.

"The history of the patient now before us (Inkpenn) we obtained very easily. Having first mentioned to those of you who were then present my opinion as to the nature of the case, I simply asked her mother whether the child was healthy as a baby, and was at once told that she had suffered most severely 'from the disease from her father.' It appears that for years she was puny and very ailing, that she had snuffles, a bad rash over the body, and 'thrush in the mouth,' which, if we interpret, probably means syphilitic stomatitis. You will notice that she has a divergent strabismus, her right eye looking outwards.

"Ann Inkpenn is the subject of caries of the bodies of the dorsal vertebræ; Sarah W— has disease of her tibia; and in the case of the third patient, Abigail Hammond, there is chronic disease of the knee-joint. All three would, a few years ago, have been considered 'strumous' in a marked degree; indeed, the form of ophthalmia from which Hammond has suffered is designated in most ophthalmic treatises as *par excellence* 'strumous corneitis.' Very vague, as you know, is the meaning usually attached to this word 'struma.' If, however, names are to be of any use as indicative of a knowledge of the causes of the malady designated, we must insist upon its receiving a modifying addition in the present instances. These patients are not 'strumous' in the sense of being liable to tuberculous affections, or likely to die of phthisis, nor do any of them show tendency to disease of the lymphatic glands. There is no reason for believing that the diseases from which they suffer are other than the direct consequences of the specific taint derived from their parents. The treatment likely to be most useful in each instance is that of tertiary syphilis, namely, full doses of the iodides and small ones of mercurials, whilst comparatively little good would come of the use of tonics and cod-liver oil. The

distinction between tubercular struma and heredito-syphilitic struma* is, therefore, one of the utmost importance."

ART. 28.—*On the Cretin Asylum on the Abendberg, and the necessity for collecting European statistics on Cretinism and Idiocy.* By Dr. GUGGENBUHL.

(Gaz. Heb. de Méd. et Chir., Dec. 21, 1860.)

In a communication addressed to the Academy of Sciences at Paris, Dr. Guggenbuhl says that the investigations which he has carried on for upwards of twenty years at his cretin asylum on the Abendberg, near Interlachen, have led to the conviction that cretinism is a grave affection of the cerebro-spinal system, consisting of various pathological changes, which changes bring about irregular and tardy development of the body, with bluntness of the senses and intellectual faculties. Among these changes he indicates—

1. Edema of the cerebrum and softening of the circumvolutions contiguous to the ventricles.

2. Imperfect or tardy development of the anterior and posterior lobes; sometimes general atrophy of the brain; more rarely hypertrophy of this organ.

3. In some exceptional cases partial or general induration of the brain.

4. Hypertrophy of the bones of the skull, causing compression of the cerebral substance. This condition characterises an advanced stage of the rachitic form of the disease.

5. Premature closure of the sutures—the result of inflammation—is a frequent cause of deformity of the head in cretins and idiots; but as he has frequently met with this state of things in persons who had no fault in their intellectual faculties, M. Guggenbühl believes that it cannot be looked upon as a cause of cretinism.

Cerebral stupor is the pathognomic symptom of cretinism; but it does not follow that certain isolated faculties may not be well developed in certain cases. In some cases, indeed, a cretin may be apt in learning languages, music, or drawing.

In the majority of cases M. Guggenbühl considers that cretinism

* The word "struma," to which some may object in the sense here used, has been retained after much consideration. We have no other word by which to designate the state of constitutional peculiarity to which reference is made. There is no doubt but that the various affections incident chiefly to childhood and the preadult period, which have hitherto been classed as struma, and will be so styled for many years, are yet really due to a variety of morbid causes. Some occur in the tubercular diathesis, some are the direct consequences of one or other of the exanthems, some are due to inherited syphilitic taint, whilst others appear to be chiefly due to a peculiarly feeble state of the capillary circulation. It is quite possible to group the various strumous disorders in relation to their different causes, though very frequently the result is complicated by the coexistence of several of the influences mentioned. Instead, however, of attempting to disuse the term struma altogether, I would propose to acknowledge that it is, when used alone, destitute of all precision as to the exact pathology of the disorder so designated, and to habitually append to it the adjectives, "tubercular," "heredito-syphilitic," "post exanthematous," &c., as the case may be.

may be traced to the influence of "causes pernicieuses locales" during the first three years of life, most frequently about the period of the first dentition, its development being accompanied by symptoms of softening of the bones (the rachitic variety), of hydrocephalus (the hydrocephalic variety), of scrofulosis (the scrofulous variety), or of general atrophy (the atrophic variety). Dr. Guggenbühl attaches very little influence to hereditary transmission as a cause. He also admits the three degrees of cretinism generally recognised, as well as the distinction established by M. Ferrers between cretinism and idiocy.

The fundamental principle in the treatment of cretinism, in the author's opinion, is to improve the physical health, first of all, by aromatic tepid baths, frictions, cod-liver oil, syrup of iodide of iron, electricity, &c., with a strengthening diet and much exercise in mountain air, which air is itself the most potent of tonic influences.

Every asylum for young cretins ought to be under medico-pedagogic control; it ought to be at once a hospital and a school, and to possess workshops, in which the inmates might learn various useful trades, for even cretins advanced in age, and incapable of the most elementary intellectual improvement, have shown an extraordinary aptitude for various in-door and out-door mechanical labours. At present Dr. Guggenbühl has obtained a cure, more or less complete, of all cretins who were under six years of age, who were capable of pronouncing a few words, and who were free from convulsions. Older than this the results are very unsatisfactory.

SECT. II.—SPECIAL QUESTIONS IN MEDICINE.

(A) CONCERNING THE NERVOUS SYSTEM.

ART. 29.—*On the peculiar expression of the face in General Paralysis.*
By Dr. TUKE.

(*Journal of Mental Science*, Jan., 1860.)

IN this paper, speaking of the peculiar expression of the face in general paralysis, Dr. Tuke says, "Even in a very early stage there is a marked look of indifference, frequently accompanied with drooping of the upper and infiltration of the lower eyelids." There is a heavy, sensuous expression about the mouth, a boyish appearance of face, the partially paralysed muscles no longer showing the lines belonging to care, sorrow, ambition or remorse. "At an early period after the accession of physical symptoms in paralytic insanity a peculiar carriage of the head forms a very prominent feature. It is no longer unconsciously balanced upon the shoulders, as in health; the patient seems to support it by a voluntary effort, and there is much rigidity of the neck induced, which is very characteristic of the disease."

ART. 30.—*Lesions of cutaneous sensibility among the Insane.*

By M. ANZONY.

(*Journal Medico-Psychologique*, 1859; and *Journal of Psychol. Med.*, Jan., 1860.)

Among 600 patients affected with different forms of insanity M. Anzony finds in more than half the number various degrees of analgesia. This state, as pointed out by M. Beau, may exist without tactile anæsthesia, but tactile anæsthesia is always accompanied by analgesia. Insensibility to common pain manifests itself sometimes in a transitory form, and in certain maniacal affections it exists only during the continuance of the paroxysm. The test employed was the shock of an electro-magnetic machine.

ART. 31.—*Delirium Tremens treated by large doses of Digitalis.*

By Dr. PEACOCK, Physician to St. Thomas's Hospital.

(*Medical Times and Gazette*; and *Dublin Medical Press*, Aug. 14, 1861.)

CASE 1.—J. T.—æt. 30, formerly a soldier, who had served in North America, the Crimea, and India, and had just returned from Calcutta, was admitted into St. Thomas's Hospital, under my care, on October 14th, 1860. He was received, labouring under symptoms of delirium tremens, at half-past two p.m., and was reported to have taken a quart of spirits daily for several days. At half-past six, when he was in a very restless and excited state, suffering from retching and sickness, and his pulse 103 in the minute, he was directed to have half an ounce of the tincture of digitalis, and the dose was given in a quarter of an hour. At a quarter to eight the pulse had fallen to 72, and was of good volume, and he was much quieter, free from sickness, and disposed to sleep. At eleven p.m. he was much in the same state; pulse 76 and regular; he had not slept, but was quiet, and still seemed disposed to sleep.

At ten a.m. on the 15th he was seen by myself; he was reported not to have slept ten minutes during the night, and had been restless and trying to get out of bed, but not violent. The tongue was dry and a little red, the pulse 80, somewhat sharp, and decidedly resistant. The sounds of the heart were natural, except the second, which was somewhat indistinct. The pupils were large, and not apparently affected by light. The urine deficient in quantity, and high coloured. His manner was hasty, but he spoke quite rationally, and he took his food well. During the evening and night of the same day he slept for a considerable period, and the following morning he was much better. He was quite intelligent, but still had a somewhat agitated manner. The pulse was 80 to 84 in the minute and feeble, and the second sound of the heart was very indistinctly audible. He was directed to have five grains of the sesquicarbonate of ammonia in an ounce and a half of decoction of bark every three hours.

On the 17th he continued to improve, and on the 18th his appearance and manner were much more tranquil, the tongue somewhat dried and slightly furred; the bowels regular; pulse 80. He had made water freely, but said that the quantity was less than usual. He was directed to have the quinine and iron mixture three times daily, and the mixed diet. To be allowed to leave his bed. When up there was a considerable increase in the frequency

of the pulse—greater than was perhaps explained by his general state—in the bed it beat steadily 80 in the minute, when sitting up it was 100, and was more irritable and feeble, and when standing it became 120, very sharp and feeble. He was presented and went out cured on the 20th. During the period of his residence in the hospital he was not allowed any stimulus.

CASE 2.—S. S.—, æt. 44, a waterman, admitted into St. Thomas's Hospital on October 15th, 1860, under the care of Mr. McMurdo, after having sustained a fracture of the thigh from a fall.

On the 18th he began to have symptoms of delirium tremens, and had become very violent when, at 4.45 p.m., a dose of forty minims of Tincture Opii was given to him. At 10.30 p.m. the laudanum was found not to have had any soothing effect, and his pulse was 120, and ʒss of tincture of digitalis was given. At 11.15 p.m. the pulse was still 120.

19th.—At 9 a.m. he was reported to have been violent during the night, but less after taking the dose of digitalis, till 4 a.m., when he again became more excited. He had had no sleep during the night, but was then quieter. Pulse 98, quiet and feeble. 4 p.m.—He had still had no sleep. The pulse was 98, full and regular. To repeat the dose of tincture of digitalis. 10 p.m.—Has still not slept. Pulse 82, full and regular. Pupils natural and contractile. He has passed a small quantity of water. He appears disposed to sleep.

20th, 4.30 a.m.—Has still not slept. Pulse 80, regular. He has passed some water, which smells of digitalis. To have a glass of gin. 11.25 a.m.—Still no sleep. Pulse 80, irregular, and intermittent. 4.45 p.m.—I saw him with Mr. Whitfield. He had still had no sleep. The pulse was 80 and irregular, and he was much depressed. To have six grains of the sesquicarbonate of ammonia in an ounce of decoction of bark every four hours. Two pints of porter in twenty-four hours. 9 p.m.—Pulse 70, irregular and intermittent. Bowels have been acted upon. To have four ounces of gin and half a drachm of the solution of hydrochlorate of morphia and a drachm of aromatic spirit of ammonia directly. 11 p.m.—Pulse 88, regular.

21st, 10 a.m.—Did not sleep till five o'clock this morning. The pulse is now 84, full, soft, regular. The tongue is dry, and he complains of thirst. He has passed water naturally. 9 p.m.—Has slept at intervals, and taken his meals naturally, is otherwise going on well.

22nd, 10 a.m.—Has slept during the night. Pulse 80, soft, slightly intermittent. The sesquicarbonate of ammonia every six hours. Full diet. From this time he progressed favorably.

ART. 32.—*On Mental Hyperæsthesia.*

By Dr. ORDRONAU.

(*Amer. Journ. of Insanity*, April, 1861; and *Med. Critic. and Psych. Journ.*, July, 1861.)

The following suggestive observations occur in an interesting lecture delivered by Professor Ordronau before the students of Columbia College, New York:

"I wish now to speak of a condition of mind, often predisposing to hallucinations, of which the authorities make no mention, although it is very common, and sometimes even dangerous in its character. It is an exaltation of, or exaggeration in, the rapidity of mental processes, due to the influence of persistent tension upon the brain. As you will naturally infer, it is the unwelcome attendant upon all active minds when overworked. I shall make no separate allusion, at this

time, to the probable influences of narcotics in assisting to produce, or to exaggerate when present, this state of the intellect. As I am making a simple psychological inquiry into a form of disorder, I shall confine myself to the essential causes producing it, and shall not venture upon any physiological disquisition into the remote and correlated sources of its origin. We can all agree upon the fact—whatever we may think of its causes—of the existence of a species of mental disturbance, born primarily of fatigue, exhaustion, or prostration; and which, with your permission, and for want of any other name, I shall call a state of *mental hyperæsthesia*. This is the state of mind in which one finds himself whose mental faculties have been strained to their utmost tension for a great length of time. The result of a long and unabated fixedness of attention upon any one train of thought, is speedily to exhaust the mind; and just in proportion to the degree of volitional effort expended, will there ensue rapidity of exhaustion. The mind, at such a time, although greatly fatigued, is not disposed to quiescence, but continues to oscillate under the reflex influence of its original stimulus.

"This, of itself, is not a condition of ill-health, if it can be speedily removed. So long as the strain does not exceed the recuperative powers of the organ thus overtasked, the shock is not immediately dangerous. But we must remember that this unnatural stimulation of a function exhausts the tone of the organ performing it, in advance of the effects of age. So that, with the mind as with the body, we can preserve it in vigour up to a very late period of life, if we will only use it as not abusing it. And I may state, in passing, a curious illustration of this truth in the fact that, at this time, the statesmanship of England is in the hands of men over seventy years of age; while in this country no man is deemed an available candidate for either judicial or political office who has passed the scriptural limit of human longevity. Now a state of mental hyperæsthesia clearly borders upon abuse of the intellectual powers; nor can we wonder, therefore, at the train of melancholy effects to which it gives rise.

"In this condition of things the brain is inordinately active; its blood-vessels are greatly dilated, its whole substance consequently enlarged. It presses in all directions upon the skull, which seems hardly of a size to contain it; and when this cerebral plethora is continued for weeks and months, who can marvel that men in the very maturity of age, and apparently strong enough to work over their desks for nine hours a day, should suddenly drop paralysed—become victims to hallucination and insanity, or, worse still, fall into apoplexies. It is not asserting too much to say, that if our time-pieces were kept wound up to a similar pitch of tension by constantly turning the key, their mainsprings, although made of steel, would not last a month! Yet this is the mental status of many professional men, particularly in large cities, where the unremitting pressure of business, and the fever of competition, stimulate them to unnatural efforts. Persons often overwork their minds unconsciously, because, through the compensating influences of nature, the external effects of the injury are for awhile concealed, and not until some unmistakeable evidence looms up across the intellectual horizon is the offender made aware of his wrong-doing.

"The majority of professional men toil far into the small hours of night and then retire—to sleep? scarcely any, if at all; but only to think over and over again the duties of the morrow, until a hazy forgetfulness, not deserving the name of slumber, steals over the still occupied brain, and leaves it to finish in dreams the disconnected fragments of daily business. Need we ask what is the consequence of this mode of life when protracted? Everything shows us that Nature's laws are never violated with impunity, and slow-footed justice, halting and lame though she may be, rarely fails to overtake the retreating criminal. In those individuals who habitually overtask the brain, we shall find manifestations of that form of hallucination which is the offspring of intensified and protracted thought. It is true *hallucinatio studiosa*, and the period at which it develops itself, will depend upon certain physical causes, not necessary to be mentioned here. Let it suffice to say, that these hallucinations are generally preceded by inability to sleep *soundly*, and this tendency to insomnia once established, readily passes into that of *coma vigilans*, a state productive of exquisite irritability. When the brain is long robbed of sleep, it loses both the knowledge of, and the ability to, sleep; so that it requires to be re-educated, as it were, into this aptitude. During this condition of vigil it reacts upon the stomach, and this again upon the brain, so that we now have two foci whence nervous irritability can be radiated and interchanged. The famous Laurence Sterne was once in this condition for several months, and Martin Luther, as the result of his protracted mental labours, was often visited by an hallucination that the Prince of Darkness stood before him, and on one occasion went so far in believing it as to throw his inkstand at him. General Rapp tells us that once, desiring to speak with the Emperor Napoleon, he entered his cabinet unannounced. He found him in so deep a reverie that his entrance was unperceived until he intentionally made a noise. Napoleon then recovered, and pointing to the ceiling said:—'Look up there! Do you not see it? It is my star! It is beaming before you. It has never deserted me! I see it on every great occasion.' Dr. Johnson, too, whose mighty intellect could endure a superhuman amount of labour, was the victim nevertheless of hallucination, and one of the most superstitious men of his time. Rare Ben Jonson was also similarly visited, and Andral, the great anatomist, was pursued for a long time by the image of a child, which he had most critically dissected. Leuret, the philosopher, himself a psychologist, was greatly annoyed by visions which he could not rid himself of. And I have several instances noted among my own observations of similar facts. A friend of mine, who is the president of a bank, and a shrewd financier and economist, is exceedingly annoyed by the presence of a bottle of sarsaparilla, which is always spouting its contents before his eyes. The moment he fixes his attention closely upon any object the bottle disappears, but on releasing the mind from this contemplation the bottle returns. Yet none of these men whom I have mentioned were insane, none would have been disqualified at law, either civilly or criminally. On the contrary, every one would pronounce them blessed with strong reason. Theirs were cases of mental dyspepsia. I am inclined to think that, in our

country, the very laws of business, of society, of education—in a word, the genius of our institutions—favours, and I may say, forces us into, a preternatural activity of mind. As slowness and deliberation of action are regarded as marks of mental incapacity, so the premium and the prize are assigned to the opposite extreme, and the man in self-defence is obliged to be ‘fast.’”

ART. 33.—*On Bloodletting in Apoplexy.*

By Dr. T. K. CHAMBERS, Physician to St. Mary's Hospital, &c.

(*British Med. Journal*, June 8, 1861.)

“The question of the propriety of letting blood,” we quote from a clinical lecture delivered at St. Mary's Hospital, “and of the mode of taking blood in cases of coma, apoplexy, and paralysis, is a very serious one. Delay may be irretrievable; yet a false step is equally fatal. The diagnosis of the actual morbid changes in the skull is very obscure, even if a full history of the patient could be obtained; and, in the majority of instances, such a history is unattainable at the time you have to act. It is necessary, therefore, to have clear, definite rules of conduct laid down previously in your minds, and to be firmly persuaded of their justice and accordance with reason; otherwise you will be tortured, when too late, with the dread of having acted wrong. And you must make the circumstances which determine these rules such as may be learnt rather from the present appearance of the patient than from the history.

“In the first place, let us clearly understand what is the *modus operandi* of the means you design to employ, and then what morbid conditions it can and what it cannot relieve.

“The two most marked immediate effects of bloodletting are, diminution of the force of the heart and contraction of the area of the blood-vessels. That these are the most important and most direct of the resulting phenomena, is shown by their being in direct proportion to the dose; the more rapid and copious the detraction of blood, the more certainly they follow. Both natural and artificial hæmorrhage thus produce first syncope, or failure of heart power; and a slackening and arrest of the blood-stream by contraction of the vessels.

“What now are the morbid conditions in apoplexy which such results as these are likely to benefit? I am not going to enumerate all the causes of apoplexy, because such a recapitulation would be very unsuited for the purpose of the present lecture, and, if they came into your head at the time you were in presence of your patient, would serve rather to confuse than to clear your ideas. A most practical thing to do will be to divide them into three heads with reference to the treatment to be pursued; and I think you will find them all capable of being classified under *destruction* of the nerve-fibres, *compression* of the same by a *solid*, and *compression* by a *fluid* substance.

“Now, if the nerve-fibres be destroyed, as is the case, for example, in what appears after death as a softening of the cerebral substance, it seems unadvisable to take away the pabulum of nutrition; for you

would be diminishing the power of the remaining brain-tissue, to take the place, as far as it can, of that which is irretrievably lost. Nor are the immediate effects of bloodletting likely to be advantageous; for in these cases the force of the heart is not morbidly augmented, and the blood-stream is in general rather deficient in quantity already. We shall probably be only adding to the disease by subtracting blood. When, then, we have reason to think from the previous history that there is old disease leading to softening of the cerebral substance, we should abstain from bleeding altogether. If, for instance, there have been before the present attack a state of mental excitement, or severe headache, or feverishness; or if the gait have been unsteady, the speech thick and stammering; if there have been earache, or a purulent discharge from the auditory meatus; if, previous to the apoplexy, there have been convulsions; if the patient be scrofulous, or of a scrofulous family, we must take all these circumstances as warnings against the lancet—altogether, probably, but certainly against its immediate use.

“Supposing, however, that we have no evidence of such a diseased state of the cerebral substance, and can allow ourselves to conjecture that the nerve-fibres are more compressed than permanently disorganized, then we have further to consider whether the compressing substance is *solid* or *fluid*. By a solid likely to cause apoplectic paralysis, I refer to a clot of blood which has been thrown out long enough to become entirely coagulated. This is the only solid sufficiently common as a cause for us to consider. Is it likely you have to deal with anything of this sort? Is there in the patient's brain before you at the moment a clot of blood such as you see put up in bottles in the museum, and often also in the dead-house? Do not be in too great a hurry to conclude so at once. Four days ago, you saw on the dissecting-table the corpse of a man who more than thirty-six hours previously had fallen down stairs, and was supposed to have fractured his skull; the cranium was uninjured, the fall was apoplectic, and there was a quantity of fluid blood pressing upon the brain. You see by such instances as these that blood extravasated from the vessels inside the body does not coagulate immediately, as it does when drawn from a vein; it remains long, and may remain much longer than it did in that case, in a liquid state. It takes, not minutes, not hours, but I may really say days, to become solid. When the apoplexy or paralysis has lasted for days, then indeed, but not till then, you may conclude that a clot has formed; and then, and not till then, may you pronounce that the force of the heart's action will not increase the oozing of blood into the focus of pressure. After that—after you have a solid, and not a fluid pressure, to deal with—I am willing to concede, and anxious to impress upon you, that abstraction of blood is useless and hurtful; but till then I believe its immediate influence to be a beneficial one, and in the right direction. Therefore do not conclude that a clot is formed, or that bleeding is for that reason useless, till at least twenty-four hours are passed after the fit.

“Supposing that a fluid has to be dealt with, you are perhaps anxious to know of what nature it is; and, in point of fact, I find I am constantly asked by students, when they see a case of apoplexy in the wards, whether it is serous or sanguineous apoplexy. I say to you

now what I always say then, that there is no possibility of certainly distinguishing them; and that, fortunately, it is of no importance to either physician or patient to do so, as far as the immediate treatment of the fit is concerned. One, indeed, forms a clot after some time, which we have been just now discussing; and the other remains liquid. But that does not affect the question of the comatose condition now before us. I will speak, then, of 'fluid;' not distinguishing blood or serum, or bloody serum or serous blood, but clubbing them all, as must be done by practical men, together. When, then, there is fluid compressing the nerve-fibres, I feel sure that there is an influence for good in bloodletting, accompanied, of course, by a danger, as all active treatment is, but still a decided influence for good. It is capable of lessening the force of the heart, which is driving the blood towards the place where it is oozing out either as serum or complete blood, and of diminishing the calibre of the vessels that allow it to pass. The anxious question is, how to secure those advantages without the necessarily accompanying dangers, without adding too great an additional shock to the already shocked nerves, without weakening fatally the already weakened general system.

"You will observe, by the example of the patient I have used as my text, that the first effect of an apoplectic seizure is the violent blow to the nervous system above mentioned. The poor woman was damp and cold, and pale as a corpse; the pulse and heart beat quick, and irregularly, and weakly, just like those of an ox stunned by the slaughterer's poleaxe. Had she been bled then, she would certainly have died outright; and moreover, even had she survived, there was no object to be gained by it; for the heart was weak enough, surely. But after a time—seven hours in this instance, sometimes sooner, sometimes later—the heart and pulse recover, and the blood must be driven against the ruptured or oozing vessels with the same force which originally caused them to rupture or ooze. Now is the time to step in with the lancet. You prevent by it what so often happens to apoplectic patients if left alone entirely; you prevent the relapse into coma which frequently follows an apparent partial recovery during reaction; you prevent it in a very intelligible way, by lowering the force of the blood-stream, which the injured vessels have already shown themselves unable to bear. This was the time, and this was the object, of the bloodletting in our patient's case. So complete was the apoplexy, by such a slender thread was she hanging on to life, that I believe the slightest additional extravasation of fluid in the cranium must have been fatal; and to this judicial use of the lancet by our house-surgeon, Mr. Chisholm, I attribute the patient's life.

"You will observe the bleeding was not a large one—only eight ounces when reaction first occurred, and eight ounces again in the evening, when the pulse was again getting hard. I mention this to warn you against a mistake into which you might be led by an old and rather questionable maxim, '*Extremis morbis, extrema remedia.*' You might be disposed to say, the more the apoplexy, the more the bleeding. Such a notion would be most dangerous. A small bleeding accomplishes the object in view; and a large one can do no more, while it seriously abridges the vital powers. Above all things, don't

open the temporal artery; it is nearly equivalent to cutting your patient's throat.

"I much prefer, in these cases, venesection to cupping the temples or the nape of the neck, as is sometimes done. What you want to do is to affect the general system, and particularly the centre of circulation—an object which is attained with most rapidity and certainty by opening a vein. You are aiming to prevent blood from being driven into the skull, not to extract that which is already in; at least, if you are striving after the latter result, your anatomy and physiology ought to have taught you better.

"The effect of bleeding during the collapse, before reaction has taken place, is, as a rule, sudden death, especially when the heart or its valves are diseased. The effects of *over-bleeding* at a later period are, an excited condition of the circulation, and consequently a more violent impetus against the brain; and, at the same time a more watery state of blood, and consequently a greater tendency to serous effusion. As it is impossible to tell whether red blood or serum is exuded in the cranium, you run the greatest possible risk of augmenting the very evil which your injudicious zeal was intended to obviate.

"Perhaps you may say, 'I am going to bleed my patient again, for the sake of encouraging absorption; and surely absorption of the clot should be aimed at.' Now, I am not so sure of that; if it were absorbed sooner than the nerve-fibres were ready to resume their functions, something else must be effused to take its place in the cranium. At all events, I am quite convinced that such absorption is best left to the reviving powers of nature; and you are diminishing these by unnecessarily depriving the body of blood.

"In apoplexy and central paralysis, remember that you are dealing with diseases where nature still retains an inherent power of repair; in a moderately healthy constitution, the tendency is to get well. Do not, therefore, attribute all cases of recovery to the means used, unless you can give a probable physiological explanation of their beneficial action; but if you can thus rationally justify your treatment, do not hesitate to feel satisfied with it, whether successful or unsuccessful.

"There is no necessity for being idle while you are awaiting the time to bleed. Stimulant injections and purgatives, hot water and mustard-poultices to the feet and legs, a careful arrangement of the clothing and bedding so as to prevent congestion to the head, with keeping up the animal warmth and keeping the friends quiet, will amply occupy your time. It is also conducive to the end you have in view to shave the head and apply cold lotions to the skull.

"After reaction has returned, you will find advantage in the application of ice to the head; it is physiologically correct, and is often a great relief to the patient. You may remember that this poor woman used the first power of speaking that returned to her in begging me to continue the ice; whenever it was applied, it induced sleep, and was most agreeable. What a strange state a person must be in for ice to the head to be agreeable! But so it was.

"When, then, you are called in to a case of apoplexy, let these considerations pass through your minds:

"1. Does it depend on destructive softening of the cerebral substance? If so, I must not let anything persuade me to bleed.

"2. Has the effusion taken place so long as to be, if blood, coagulated? If so, again, I had better abstain.

"3. If it be fluid, bleeding is very much to be desired; it may prevent increase of the effusion and relapse.

"4. But, to make bleeding most useful and least hurtful, the proper time must be selected; namely, the time when the heart regains its strength.

"5. The best guide is the circulation. The sharpness and hardness of the pulse and heart, as felt by you, are a faint picture of the sharpness and hardness of the pulse, as felt by the patient's brain. With your fingers on the wrist, let your mind travel into the interior of the skull."

ART. 34.—*Case of Traumatic Tetanus treated by Tincture of Aconite.*
By Dr. EDWARD WOAKES, of Luton.

(*British Med. Journal*, Oct. 26, 1861.)

CASE.—Arthur L.—, æt. 10, on the afternoon of March 6th, 1860, having placed his hand over the muzzle of a gun, not knowing it was loaded, to "feel the wind" from the explosion of a cap, received the charge in the palm of the right hand, through which it passed into his face; one or more shots penetrated the left eye. Each of the metacarpal bones of the right hand was shattered, and the first row of the carpus exposed. The flexor tendons were much torn, and the palmar arches destroyed; nevertheless, it was resolved to save as much as possible of the hand, the thumb being intact. The second finger only was amputated at the carpus; all loose splinters of bone were removed; and the ragged ends of tendon, &c., were cut away. When the edges of the wound were adjusted and secured by sutures, the hand presented a compact and promising appearance. It was supported on a splint, and cold water applied.

For the following three days he went on well; the swelling of the face, from the numerous shot wounds, was subsiding, though the left eyelids were closed and the eye painful.

March 10th.—Last evening, about 9 p.m., he began to complain of slight intermitting pain in the injured limb. In the night he had crampy pains in the legs. At 3 a.m. the legs were drawn violently backwards in a succession of jerks. At 7 p.m., when I saw him, there were dysphagia and trismus; the teeth could not be forced more than half an inch apart; but there was no risus. He was sleepless; the pulse hard, 110; the bowels open. I prescribed two thirds of a minim of tincture of root of aconite (prepared by Battley and Watts), to be taken every hour in a drachm of water, and three ounces of brandy during the day. The wound at the back of the hand had a sloughy appearance and was poulticed.

At 9 a.m. he took the first dose, and shortly afterwards expressed himself as much relieved. He experienced several other opisthotonic seizures during the day, but much less severe in character. After about four doses of aconite the pulse fell to 96, and was much softer.

11th.—He had more spasms during the night, but the trismus had entirely disappeared. At 11 a.m. he had slept four hours, during which time he had had frequent slight spasms; he was comparatively free from them when awake. Pulse 92, firm. He was ordered to have a minim of the tincture of aconite every hour, and, during the day, two pints of milk, six ounces of wine

(instead of brandy), and three eggs. The wound having improved in appearance, warm-water dressing was substituted for the poultice, and from this date granulation progressed steadily.

12th.—He slept five hours during the night, though, when asleep, slight spasmodic snatches occurred about every quarter of an hour. At 7 p.m. he had a severe attack of spasm, chiefly in the right arm. He says the cramps were easier the oftener he took the medicine, which he now did every half hour when in pain. Pulse 100, small.

13th.—The bowels were confined. He had not so good a night, having much crampy pain. The dose of aconite was increased to a minim and a half, and the bowels were freely opened by a purge of calomel and jalap.

14th.—He slept but little during the night, but has had no cramp since the bowels were relieved yesterday. He was ordered to take the aconite every second hour. At 1 p.m. he became suddenly faint, and a succession of fainting fits occurred, lasting about an hour and a half. The aconite was repeated by his attendants; it, however, only increased the symptoms; and at 3 p.m., when he was seen, his breath was laboured and slow, and he had lost all power in the sound arm. He soon revived on taking a quantity of brandy, and the aconite was now entirely discontinued.

From this time he progressed slowly towards recovery. The left eye was lost from suppurative inflammation, the result of the shot-wounds, and is now collapsed. The hand made a good cure; and the result, both in an æsthetical and practical point of view, fully justifies the attempt made to save it.

Dr. Woakes also suggests the use of aconite in strychnine poisoning, and relates three experiments upon dogs, in which the symptoms of this poisoning would seem to have been in some degree antagonised by the administration of aconite.

ART. 35.—*On the use of Woorari in the treatment of Nervous Maladies, and especially of Epilepsy.* By M. THIERCELIN.

(Gaz. Hebdomadaire de Méd. et Chir., Nov. 23, 1860.)

In a communication addressed to the Academy of Sciences at Paris, M. Thiercelin relates two cases of epilepsy in which this mode of treatment was partially carried out. One of these cases was that of a young man affected with congenital and hereditary epilepsy, who had been for four years an inmate in the asylum at Charenton. Looked upon as incurable, he had had no medicine of any kind for at least two years. His attacks varied in number from fifteen to twenty in the month, the majority being severe forms of the *haut mal*. The other case was that of a girl, aged seventeen, an epileptic of eight years' standing. During the first year the attacks were simply vertigo; afterwards they assumed the character of the *haut mal*, and for two years they were confined to the night. During the last five years they occurred night and day indifferently, the number varying from twenty-eight to twenty-nine in the month, and the form being always very violent—piercing cry, strong convulsion, foam at the mouth, stertorous breathing, &c., being present in almost every one. For three years this patient has been under the care of a physician justly celebrated for a special knowledge of the complaint.

Under the influence of woorari, in daily doses varying from three

to five centigrammes, applied epidermically, for the space of two months (January and February last), the author saw the attacks diminishing in number, in the one case from fifteen or twenty to five, in the other from twenty-eight or twenty-nine to eight—in the second month. He saw, also, a sensible change for the better, both in the attack itself and in the general health. It must be understood, however, that this treatment by woorari was not alone trusted to, and that the patients all along were living upon an unstimulating diet, and taking valerian, &c.

At the end of two months the supply of woorari failed and very soon the attacks had resumed their former frequency, or thereabouts, namely, fifteen in the month in the one case and twenty-four in the other. A month later a new supply was obtained, and the treatment was resumed in the case of the girl only, the quantity being not sufficient for the two. This treatment was carried on carefully for ten days, and during this time there were only three attacks, all slight and all at night. The improvement in other respects was also unmistakable. On the eleventh day the supply of the medicament failed, and in the night following there were three attacks, in which there was more convulsion. On the twelfth day M. Thiercelin sent to the parents of the patients a gramme of woorari, divided into fourteen packets, each packet intended to serve for three dressings; and twelve days later he learnt that up to that time there had only been two night attacks of medium severity. This is the last report. What the ultimate issue may be remains to be seen, and in the mean time the subject is referred to a commission composed of M.M. Flourens, Velpeau, Pelouse, Claude Bernard, and J. Cloquet.

ART. 36.—*On the Surgical Treatment of Epilepsy.*

By Dr. J. S. BILLINGS.

(*Cincinnati Lancet and Observer*, June, 1861; and *Amer. J. of Med. Science*, July, 1861.)

The two statistical tables which we copy are taken from a long paper on the subject.

1. *Trephining the skull.*—This operation has been performed in a number of cases in which the disease resulted from injury to the head. Dr. Billings gives the following table of seventy-two cases:

Operator.	Result.	Where reported.
Coates.....	Cure	Edin. Medical and Surgical Journal, 1806.
Wells	Cure	Trans. of Soc. for Imp. of Med. and Surg., 1812.
Howship.....	Death.....	Abercrombie on Diseases of Brain, p. 196.
Crampton	Cure	Dublin Hospital Reports, vol. i.
Berard	No change...	Gazette des Hôpitaux, April, 1846.
Birch	Cure	Sir A. Cooper's Lectures on Surgery, vol. i.
Riboli	Cure	London Medical and Surgical Journal, 1826.
Rhodius	Cure	Centur 1, obs. 66.
Steidele	Death.....	Chirurgischche Beobachtungen.
Farre	Death.....	Sir A. Cooper's Lectures, vol. i, p. 170.

Operator.	Result.	Where reported.
Fricke	Death.....	Bruns' Chirurgie.
Riencke	Death.....	Bruns' Chirurgie.
Marchetti	Cure	Dict. des Science Médicale, art. Epilepsie.
Boyer	Death.....	Dict. des Science Médicale, art. Epilepsie.
Boncher	Cure	Dict. des Science Médicale, art. Trepan.
La Motte	Cure	Dict. des Science Médicale, art. Trepan.
B. Bell, two cases	Both fatal ...	Bell's Surgery, vol. ii.
Do. do.	No change...	Bell's Surgery, vol. ii.
Buch	Cure	Travers on Constitutional Irritation.
Blake	Cure	London Medical and Physiological Journal.
Johnson	Cure	Virginia Medical Journal, 1837.
Howard	Improvement	Trans. of State Med. Soc. of Ohio, 1843.
Hulihen	Cure	Reported to me by Dr. Boerstler.
Gross, three cases	All fatal.....	Gross's Surgery, vol. ii.
Kite	Cure	Bruns' Chirurgie.
Robertson	Cure	Gazette Médicale, 1848.
Wurm.....	Cure	Surgical Writings of Schmucker, 1776.
Gross	No change...	Gross's Surgery, vol. ii.
Tripler	Death.....	
Palmer	Cure	London Medical Gazette, vol. xvii.
Warren, two cases	Cured.....	Boston Medical Magazine, vol. i.
Brainard.....	No change...	Chicago Medical Journal, 1859.
Do.	Improvement	Chicago Medical Journal, 1859.
Do., four cases	All cured ...	Chicago Medical Journal, 1859.
Elliott.....	Cure	Transylvania Journal of Medicine, vol. ii.
Dudley	Improvement	Transylvania Journal of Medicine, vol. i.
Do., four cases	Cured.....	Transylvania Journal of Medicine, vol. i.
Rogers	Improvement	New York Med. and Phys. Journal, vol. v.
Dixon	Cure	Boston Med. and Surg. Journal, vol. xxxi.
Pancoast.....	Cure	Philadelphia Medical Examiner, 1849.
Pope	Cure	St. Louis Med. and Surg. Jour., vol. vii.
Guild	Cure	American Jour. of Medical Sciences, vol. iv.
Hayward	Cure	Boston Medical and Surgical Journal, 1838.
Hobson	Cure	Western Lancet, vol. ix.
Do., two cases	Cured.....	Western Lancet, vol. ix.
Do.	No change...	Western Lancet, vol. ix.
Yandell	Improvement	Western Jour. of Med. and Surg., vol. vii.
Cadwall	Cure	Boston Med. and Surg. Jour., vol. xxvii.
Hayward.....	Cure	Boston Med. and Surg. Jour., vol. xxviii.
Trowbridge.....	Cure	Boston Med. and Surg. Jour., vol. xxviii.
Do.	Cure	Boston Med. and Surg. Jour., vol. xxviii.
Hayward.....	Improvement	Boston Med. and Surg. Jour., vol. xxiv.
Mitchell	Cure	Materia Medica and Therapeutics.
Wells	Improvement	Essays on Path. and Therap., by Dickson.
Campbell	Cure	American Jour. of Medical Sciences, vol. xii.
Yeates.....	Cure	American Jour. of Med. Sciences, Jan. 1860.
Blackman, one case	Improvement	
Do., two cases	Death.....	
Edwards, two cases	Death.....	

Making in all seventy-two cases, of which sixteen proved fatal, or 22½ per cent. Forty-two cases are reported as cured, four unchanged, and the remainder improved, but not entirely relieved.

In addition to those mentioned in the table, several cases have been reported by Dr. Stone, of New Orleans, but Dr. Billings has not been able to obtain access to the journals containing them.

This operation has been also recommended in cases which had not been the result of injury, but the statistics have not been collected.

2. *Ligature of one or both carotids.*—The following table gives the result of all the cases in which this operation has been performed which Dr. Billings has been able to find:

Operator.	Result.	Where reported.
Boileau	Cure	Journal Univ. des Sciences Médicales, 1825.
McClellan	Improvement	American Medical Review, vol. iii.
Becton	No change ...	North Amer. Med. and Surg. Jour., 1827.
Preston, three cases	All improved	Trans. Med. and Phys. Soc. of Calcutta, vols. v and vi.
Hamilton	Cure	Buffalo Medical Journal, vol. ii.
Angell	Cure	North Amer. Medico-Chirurg. Rev., 1858.
Do.	Death	North Amer. Medico-Chirurg. Rev., 1858.
Brown, U.S.A. ...	Cure	Peninsular Journal.
Weber	No change...	Peninsular Journal, 1859.

ART. 37.—*Case of Castration for Epilepsy.*—By Dr. L. ROOKER.

(*American Quart. Journ. of Med. Science*, July, 1861.)

The sole notice of this case to which we have access is very scanty. It is simply this:—"Dr. L. Rooker records ('Cincinnati Lancet and Observer,' May 1861) a case of epilepsy in a man, thirty-five years of age, resulting from self-abuse, to desist from which was impossible. His expression was idiotic, and he avoided society, particularly that of females, for which last he had an abhorrence. On the 21st of January, 1861, Dr. Rooker performed double castration, and at the date of the last report (April 20th) the patient is said to be improving rapidly, and has had no fit since the operation.

"We hope the author will report the future history of his case, as it would be premature as yet to pronounce the operation successful."

ART. 38.—*A case of Hydrophobia, with a novel method of treatment.*

By Dr. W. J. MOORE, Assistant-Surgeon in Medical Charge of the Abou Sanitarium.

(*Trans. of the Bombay Med. and Phys. Society*, No. VI, New series, 1861.)

CASE.—W. D—, Private, H. M.'s 33rd Regt., æt. 21; completed three years of service; time on the station, one year and eight months.

December 4th, 1860.—About eleven o'clock, a.m. to day, I happened to

visit the hospital, and found several individuals engaged holding the patient, who was struggling under their hands on his hospital "charpai." I found him suffering under convulsive movements of the whole of the muscular system, which came on at intervals of a minute or so, and assumed the form of emprosthotonos and opisthotonos. The pupils acted naturally; conjunctivæ slightly injected; face flushed; pulse, although not bounding, full and quick, but without jar or thrill; heart's action violent; surface bathed in perspiration; hands and feet warm; countenance during the spasm distorted; intermissions between the latter perfect; and some frothy saliva issuing from the mouth. On speaking to him he appeared sensible of what was said, but was unable to articulate at all distinctly, his attempts merely resulting in a hoarse, croaking noise. The mouth was easily opened; but during the spasms the commissures of the lips were drawn back, and the teeth exposed in a ghastly grin; while inspiration and expiration were performed with effort, and a hoarse, bronchial noise.

The history I obtained *at the moment* was, that the man had been employing himself in the morning at his business (that of a shoemaker), that he had left his work, in order to hear something read from a newspaper; and that while listening, he suddenly fell down, without scream or shout, and commenced struggling and "choking." No one was aware of his ever having had an attack of the kind before, and his character was reported good.

After a few minutes (perhaps five) devoted to the consideration of this case, I dissolved one grain and a half of tartar emetic in an ounce and a half of water, and proceeded towards him, for the purpose of administering the dose. At the sight of this fluid in the measure glass his countenance evinced great alarm, he endeavoured to put it away with his hands, and when they were held he shrugged up his shoulders, trying to upset it, and *kept* his mouth *obstinately* closed against the administering of the medicine. During this time almost incessant, although decidedly intermittent, spasms continued, together with constant hawking, spitting, and ejection of frothy mucus from the mouth; while he constantly put his hands to the throat, as though "clawing" to remove some obstruction there.

Considering, however, from the state of the circulation, that the depressing effects of the antimony would be more likely to subdue this spasmodic condition and moderate the action of the heart than most other remedies, I persisted in administering it, and as it was impossible to do so through the mouth (on account of the closure, struggling, spitting, and endeavours to eject), I gave it with a spoon through the nose (a mode of procedure I have frequently adopted with unirritating medicines, when attending insane patients, &c.), which *volens volens* necessitated the swallowing of the fluid by the patient.

During all this period the convulsive paroxysms continued; the eyes became prominent, the face turgid; and the hawking, spitting, and clawing at the throat were almost incessant, with occasional violent screams; but more frequently hoarse cries.

Of course, with this array of symptoms, I lost no time in inquiring from the companions of the patient if they knew of his having been bitten by any animal, cat, or dog; and one man, his particular friend (G. H. by name), immediately stated he had often heard the patient speak of having been bitten, he thought, by a mad dog, but when or where the accident occurred he was unable to recollect. On examination of the body and limbs, scars were seen on the thigh, but no inflamed wound.

After this, notwithstanding the sudden manner of accession, little doubt remained in my mind as to the nature of the disease, and knowing that it is

uncertain if any remedies have the least influence over the affection, I determined to put in practice a plan of treatment which, so far as I am aware, has never before been made available. I allude, in the first place, to cold affusion to the head, with exposure to the open air; and, secondly, to quick vesication over the trachea and larynx.

Accordingly, I had the cot and patient removed into the verandah, and commenced pouring cold water on his head from as high as I could conveniently reach when standing on the side of the "charpai." At this time the hawking, spitting, and clawing at the throat were very incessant, and the first canful of water induced frightful spasms, both generally and of the muscles of the throat and chest. At the second canful they became less intense, the pulse began to sink both in force and frequency, and the countenance became pale; three or four more canfuls reduced the circulation to an intermittent condition, and the spasmodic phenomena subsided to a mere trembling, while the patient lay in a semi-conscious state, with tremulous eyelids and sighing respiration, as though recovering from a fit of syncope.

At this time occurred one of the most characteristic marks of hydrophobia. A stick happening to fall into a bucket of water, close to the bed, produced a splashing noise, which was immediately followed by a renewal of the spasms, and difficulty of breathing. I renewed the cold affusion for a short period, with the same result as before; and while the patient remained in a quiescent state I administered an injection of warm water and castor oil, which, remaining a short time, was eventually returned, without bringing away much fecal matter. I also gave two drops of croton oil by the mouth (placing it on the back part of the tongue with a feather), and applied the nitrate of silver very freely over the trachea and larynx externally. It was now nearly two o'clock, and the patient appeared inclined to sleep. He was directed to be allowed to remain quiet.

On returning to see him at three p.m., I found spasms had occurred in a minor degree, and it was reported that motion or sound of water near him induced an accession. The pulse at this time was feeble and about 85, countenance pale, and head free from heat; the spitting and secretion of mucus continued; and in answer to questions he would only exclaim, "Oh, what will I do! what will I do!" I now administered chloroform, and after the inhalation of four drachms and a half the anæsthetic effect, as far as complete relaxation of the muscular system, was obtained. He then remained quiet for a considerable time, not recovering from the effect of the chloroform for nearly one hour.

At half-past five p.m. he was lying on his side, spitting and hawking as before, but the secretion of mucus was less. On offering water a renewal of the spasm in the throat was induced, but there was very little convulsive action of the general system. The man was evidently better, and he had no fresh remedy ordered.

9 p.m.—By this time the spasms had again increased, both of the throat and generally, and spitting and hawking continued. He was quite sensible, but articulation was very indistinct. He did not seem to mind so much about the noise of water; but he was very restless, and continually clawing at his throat. I again administered one drachm and a half of chloroform, which induced relaxation, and I also applied the nitrate of silver to the spine. He now remained quiescent for more than one hour, when I administered by the mouth, without producing spasm, but with evident reluctance evinced by the patient, five grains of the extract of *Cannabis Indica* in two ounces of water.

12 p.m.—At this period the convulsive paroxysms had ceased. The

breathing, however, was bronchial, and voice hoarse; the nitrate of silver had raised a blister, and the hands were constantly fingering the throat. Repeat Ext. Can. Ind.

December 5th.—This morning the patient lies in a quiet state, but the voice is hoarse, indeed almost lost. All other symptoms have ceased, and when asked if he has pain he points to his throat and head: no medicine.

Vespere.—Improved in all respects; but cannot articulate.

December 6th.—No fresh symptoms have occurred, and he can articulate more distinctly, but is very hoarse. In reply to questions, he now somewhat unwillingly states that, some three years back, he was bitten by a dog on the hand; that he did not think the dog was mad, but that he killed the animal, being afraid he was mad. He also stated that he had felt unwell previous to his sudden attack, and had been "cold all over," with aching of his limbs and secretion from the nose. He did not, however, remember that he had felt his throat sore, neither had he been troubled by dreaming more than usual.

December 7th.—No fresh symptoms. Suffice it to state that from this time he gradually improved, and was discharged on the 15th of the month, having taken quinine for a few days previously.

ART. 39.—*Case of Paralysis of both sides of the Face.*

By Dr. GAIRDNER, Physician to the Royal Infirmary at Edinburgh.

(*Lancet*, May 18, 1861.)

This excellent illustration of a very remarkable and rare form of paralysis is taken from a clinical lecture, and its interest is not a little enhanced by the clear manner in which it is commented on.

CASE.—A well-formed and robust Berwickshire toll-keeper, James D—, æt. 24, sent here by Dr. Philip Maclagan, of Berwick, under whose care he has already made some little progress towards cure. The phenomena are, however, still amply characteristic.

He presents no symptom of disease of the brain; his intelligence is quick, and quite above the average; his walk is steady, his grasp firm, and his sensibility to all impressions unimpaired. He has never had at any time any unusual sensation within his head; and, so far as this disease can be connected with any previous one, it is with fleeting rheumatic pains of the back and shoulders. He is disposed to ascribe his complaint to cold caught when exposed to the night air in light clothing, in the exercise of his business. He will tell you that the first time he observed anything wrong was some weeks ago, and that what he then observed was that he could not twist his face into the usual positions for easy shaving. This he observed on one particular morning, and he mentioned it to his wife. The latter then noticed for the first time—as, indeed, he did himself—"a great stillness" in his face; this did not appear to increase after he observed it, but rather the contrary. He also noticed a difficulty in speaking and in whistling; also that the food he ate was apt to stick between his gums and his cheek, and he had constantly to use his tongue or his finger to dislodge it from that position. But other trouble in eating he has had none; no difficulty in masticating or in swallowing; no imperfection of taste or smell; no want of common sensation either within the mouth or in any other part of the face. And this disease, strictly limited to the face, has been throughout unattended by pain or uneasy

sensations of any kind, with the exception, perhaps, of those rheumatic feelings in the back before mentioned.

These are the symptoms of a well-marked case of *paralysis of the portio dura on both sides*, a disease of which I have seen only one other example, but of which several instances have been placed on record by Romberg, Christison, Todd, and others, and especially by M. Davaine,* who has written a most instructive memoir on the subject, of which I shall avail myself in investigating the present case.

The portio dura is, as you know, the nerve of motion of the face. When it is paralysed on one side only, as is usually the case, the result is a marked distortion of the features, which are drawn forcibly over to the unaffected side, especially in speaking, while on the paralysed side the physiognomy is expressionless and flaccid. Nothing can be more clearly defined than a case of this kind; you recognise it at a glance, without putting a question. When paralysis of the portio dura is double and symmetrical, as in the present case, it requires a somewhat closer observation for its detection; there is no positive deformity, and therefore the diagnosis rests on something deeper than first appearances. You cannot fail, however, to have noticed the smooth, hanging aspect of the upper lip, the motionless nostril, the relaxed and undimpled flat cheek, of this man. These signs are, so far, characteristic; but here are some more striking ones, requiring the face to be thrown into action to discover them. He cannot shut his eyes at all completely; when he attempts to do so the eyeballs are turned up, and the white of the eye alone is visible. Neither are the eyes closed under the powerful reflex stimulus of suddenly touching the eyelashes with the finger. He reports, however, that in sleep, or when composing himself to sleep, the eyes *gradually* close—a result possibly due, not so much to contraction of the orbicularis muscle, as to complete relaxation of its opponents, and especially the levator palpebræ superioris, which is, as you know, under the dominion of the third nerve. The patient has some power over the occipito-frontalis muscle; the wrinkles of the brow are not obliterated; and it is remarkable that he can do what some people cannot do—viz., he can give a certain amount of motion to the ear, particularly on the right side. The posterior auricular branch and the upper temporal branches of the nerve are therefore nearly unaffected. He has almost no voluntary power over the alæ of the nose, which, however, are not so flaccid as to be drawn in forcibly during inspiration, as is described in some cases. The cheek is almost perfectly flaccid, and offers no resistance to a finger introduced into the mouth, on either side. The buccinator muscle, therefore, is almost completely paralysed. Nevertheless, all the movements of mastication are perfectly well performed, and thus we ascertain that the motor branch of the fifth nerve is entirely unaffected, a fact which corroborates very decidedly the opinion of my friend and colleague, Dr. Struthers, that *the portio dura is the sole nerve of motion for the buccinator*. Dr. Struthers bases this opinion on the observation of several cases of paralysis, both of the fifth nerve and of the portio dura. It is right to say, however, that some eminent authorities have arrived at a different conclusion.

To proceed. There is a most ludicrous inability to whistle, there being not even the smallest approach to the circular contraction of the lips. The lips remain pretty close to each other, simply because that is their natural position; he cannot compress them in the least, and in attempting to speak such a simple word as “papa,” the air escapes between them involuntarily, marring the purity of the articulation. He is equally at fault with “mamma,” the first word of infancy; but he can say “la la” or “ta ta” quite well and distinctly. Lingual articulation is, therefore, perfect; labial articulation, on the

contrary is much impaired. Try him with a guttural, or a mixed guttural and lingual sound, but in doing so, make allowance for his Berwickshire *burr*, evidently habitual to him from his youth. "Gag," "gurgle," "Gregory,"—he can utter them all unfailingly. The pronunciation of "lamp," and "lamp-lighter" is peculiarly absurd, and at the same time characteristic. You observe, he has it "lanh-lighter," something like the effect of an aspirate after the French, nasal *n*; there is no closure of the lips, but in all other respects the word is correct. The words "goggle," "ranter," "troglodyte" (the last not an easy word for a bad speaker), are quite correctly pronounced in every respect. There is a defect of articulation, then, but it is absolutely limited to one class of sounds—those formed by the lips; and this defect, with this absolute limitation, let me tell you, is almost never met with in those diseases of the brain in which articulation is impaired; at least, within my experience, such a defect of articulation so limited, in connexion with cerebral disease, has never occurred.

According to M. Davaine, to whose excellent monograph I have just now referred, it is not in all cases of paralysis of the portio dura indiscriminately that the affection of speech is limited to the labials. In the majority of those unconnected with disease of the brain it is so; but there are also cases of this kind in which the movements of the tongue and palate are affected, and in which, therefore, there is imperfection both of the lingual and guttural articulation. The particular movement of the tongue that is most apt to be impaired is the elevation of the tip; the organ can always be protruded to a certain extent, as this is done by the hypoglossal nerve, or ninth pair of Willis; it can also be moved from side to side; but it is raised with difficulty; it is protruded *to the full* with difficulty; the delicate movements of the tip against the teeth and roof of the mouth are either lost or impaired, and hence the defect of lingual articulation. This impairment of the movements of the tongue in certain cases of paralysis of the portio dura is, I believe, a fact based upon actual observation in a sufficient number of instances to give security against casual mistakes, though I have not myself had an opportunity of corroborating the observation. It is plausibly explained by the well-known anatomical fact, that the chorda tympani nerve leaves the portio dura just before it emerges from the stylo-mastoid hole, and arches forwards to join the gustatory nerve of the fifth pair, in company with which it is distributed to the front portion of the tongue, sending branches to some of the superficial muscles. And in like manner the sluggishness and imperfection of the movements of the soft palate in some cases of portio dura paralysis, and in particular the deviation of the uvula to one side or other, are explained by the course of the Vidian nerve, which leaves the ganglion-like enlargement of the portio dura at its first bend within the petrous portion, and crosses over the surface of that bone, and through a canal in the body of the sphenoid to Meckel's ganglion (spheno-palatine), whence it is distributed to the soft palate. I do not entirely, and without reserve, adopt all of these theoretical views; at the same time I see no reason to set them aside, or even to doubt them, if the facts on which they are founded are correctly stated; and for these facts I must refer you to M. Davaine's memoir. In general terms, he states that complete paralysis of the internal branches of the portio dura (*i. e.*, the branches internal to the stylo-mastoid foramen) is evidenced "by dysphagia, by speaking through the nose (*nassonnement*), and by difficulty of pronouncing the lingual letters."

Now you will see more clearly the *rationale* of some of the observations we have made already, and of some of those which we have yet to make. In James D—the linguals are perfectly articulated; there is no speaking through

the nose and no difficulty of deglutition nor of articulation of the gutturals. Observe that his tongue is protruded with ease, exactly in a straight line, and to the full extent; the tip can be easily made to fit the roof of the mouth, or to curve over the teeth or upper lip; the soft palate is very mobile; the uvula is not drawn to one side or the other. Let me add, what you can inquire about for yourselves, that his taste, smell, and hearing are quite perfect. I make this remark because all of these senses have been found in particular cases of paralysis of the portio dura to be impaired, either from the direct association of the trunk of that nerve with the auditory, or by its connexion, through the sympathetic ganglia, with the accessory nerves regulating the special senses.

I conclude that in our patient, James D—, the Vidian nerve is unaffected, the chorda tympani is unaffected, the auditory nerve and the nerve of Jacobson, with their communications are unaffected and all the connecting branches with the sympathetic are unaffected; in short, there is no disease of the portio dura within the stylo-mastoid foramen. But further, the motion of the ear and the freedom of motion of the tongue and chin show that the auricular muscles, and the stylo-hyoid and digastric, which receive the first branches of the portio dura after it emerges from the cranium, are not involved in the paralysis; and even the occipito-frontalis muscle is nearly exempt. The paralysis is therefore a partial, though very considerable and widely extended, paralysis of most of the external branches of the portio dura, but of these only.

Another proof that the paralysis is wholly *excentric*, and even does not proceed from any point very far back in the trunk of the nerve, is that the reflex acts are quite as much abolished over the sphere of the paralysis as the strictly voluntary acts. This is the opposite of what is observed in centric paralysis of the portio dura, in which form of disease you can generally cause pretty complete movement of the part affected by tickling or pinching or brushing the eyelashes, or even bringing a finger suddenly near the eye. In James D— none of these effects follow, and the automatic acts are equally paralysed. Indeed, one of the strangest features of the case is what he himself calls the "stillness"—the total absence of expression; more remarkable in this instance, because our patient is evidently a man of quick intelligence and sensibility, ready with his replies and perfectly up to a joke—among other things, the joke of laughing, as you see him do now, with his larynx and his diaphragm, and with everything but his face. His face is that of a mute at a funeral; even when I try him with a bit of Robert Burns, whom he well understands and appreciates, I fail to draw a single smile out of him. It all ends in an *inward guffaw*—a sort of light comedy played behind a mask; and it is the same for all other emotions. He is cut off from all communication with his kind, so far as facial expression forms a means of communication; and he evidently feels the loss acutely, for it was one of the first facts noticed, and the one on which he most insists. This is a constant condition in double paralysis of the portio dura, and most decidedly in the paralysis of the external branches. Another fact, but one which we have not had an opportunity of noticing here, is that the blush of shame and the paleness of terror come and go independently of this paralysis, and often form the only index in the physiognomy to these states of the mind in patients thus affected.

I have thus far presented you with a sort of physiological analysis of the facts of this most interesting case. Now, as regards the cause, the prognosis, the treatment. It will be apparent to you that the whole of the characteristics of such a case as we have here, or rather let me say, the whole practical relations of cases of facial paralysis in general, will depend upon the exact seat of the affection; and this is still more true, if possible, of the double

paralysis than of the single; for example, if the cause of paralysis is *within the cranium*, it is to be judged as a true cerebral disease, formidable in proportion to its extent and its nearness to the centres of life; if, again, the cause is altogether *external*, both the prognosis and the treatment are widely different; while a paralysis due to disease of the nerve *within the bony canal* has laws of its own, inasmuch as it usually depends upon disease of the bone, and is dangerous or the contrary, amenable to treatment or not according to the character of the particular form of disease of the bone with which it is associated. Now, not to enter into a general disquisition of this rather large subject, I will remark that the present case has no character of cerebral paralysis, which may, therefore, be left out of the question; neither is there any proof of disease of the bone or of the nerve within the bony canal; moreover, the patient has never been affected with syphilis, he has no trace of a scrofulous or tuberculous constitution, and he never has had any discharge from the ear or pain over the mastoid cells. The common causes of injury to the nerve within the aqueduct of Fallopius are, therefore, excluded by the history. Again, he has not had any swelling of the parotid gland, or of the external parts through which the nerve passes. Taking these facts in connexion with the previous investigations, I conclude there has been no disease of the trunk of the nerve, but an affection (certainly a severe affection) probably due to cold, and connected with rheumatism, of the external branches alone. Moreover, the acute disease of the nerve, whatever it may have been, is now over; the parts are very slowly recovering their tone. What we have to do is chiefly to aid the gradual restoration of function, both of muscle and nerve, by the employment of galvanism, by exercise of the muscles, and perhaps by counter-irritation. He has, in fact, been using the galvanic battery daily since he came here, with obvious benefit; he will continue to employ it, under Dr. MacLagan's directions, at home, along with the internal use of iodide of potassium, which (I can hardly tell you why, unless it be from their frequent association with syphilitic periostitis) has been found to be useful in many of these cases. The patient returned towards the end of April to show himself; the improvement had been progressive, but the recovery was still incomplete.

ART. 40.—*Case of Paralysis of the Ophthalmic division of the fifth pair of nerves.* By DR. CHARLES ARCHER, Professor of Ophthalmic Medicine and Surgery in the Calcutta Medical College.

(*Indian Annals of Medical Science*, No. XII, 1860.)

The following interesting case is made the text for a clinical lecture on *anæsthesia oculi* at the Calcutta Medical College Hospital.

CASE.—Kassinath Raha (Case 70, Book 233), applied for relief July 6th, 1859, as an out-door patient of the Calcutta Ophthalmic Hospital, suffering from superficial *anæsthesia* of the right eye-ball, and total loss of vision. He is a Hindoo, and is a native of Comillah, Zillah Tipperah, in Bengal; forty-two years of age, is of the Kayest, or Writer caste, and has followed the occupation of assistant to a lime merchant. There appears to have been no hereditary disease in this patient, who states that about twenty years ago he contracted syphilis, and suffered from secondary symptoms for two years afterwards, and was cured without mercury; since which time he has not suffered from any skin disease, but has been subject to rheumatism for the last sixteen years. About four years ago he had a violent attack of catarrh,

accompanied with severe epistaxis, from which time to the present he has suffered from hemicrania, with violent nocturnal exacerbations, which have become gradually milder in character, terminating in a dull, aching pain in the right side of the forehead, and the margins of the right orbit, succeeded by a sense of numbness and gradual loss of sensation. He cannot tell the exact time when it first commenced. As this symptom increased, the skin began to grow lighter in colour, which appearance first took place on the forehead. Coincident with numbness and loss of colour, dimness of vision came on, which was complicated about six months ago with an attack of conjunctivitis. On admission he was suffering from entire loss of common sensibility of the ocular and palpebral conjunctiva; the eyeball could be moved with the fingers without giving rise to the slightest uneasiness; the loss of sensibility extended to the skin covering the eyelids, the upper one especially, part of the right cheek, right forehead and nose; sensibility was perfect on the left side of the mesian line; some slight difficulty existed in closing the right eyelids, which, however, could be accomplished perfectly. There is an obtuse, aching pain in the eyeball and orbit. The eye can appreciate only a dull sense of light, without the power to distinguish objects. There is formication generally on the affected side, he complains of a feeling of coldness in the diseased parts, especially in the eyeball, which is compared to a piece of ice. He complains of the absence of sensible perspiration from the affected side, which symptom has been carefully verified in the hospital. At the commencement of the disease there had been increased lachrymation from the right eye, and the Meibomian secretion was thick and glutinous; there had been an abundant flow of mucus from the right nostril, and the power of smell was slightly affected. This state continued for four or five months, after which the running from the nose stopped, and the sense of smell returned, the excessive lachrymation ceased, and the Meibomian secretion became normal. At present there is a slight increase of lachrymation in the affected eye. The skin of a portion of the right cheek, the right side of the nose, and the right half of the forehead, is of a much lighter colour than the other parts of the face, owing to the partial loss of the pigmentum nigrum in the rete mucosum. The hairs of the right eyebrow are lighter in colour than those of the left. The eye has a muddy appearance; the conjunctiva is varicose and in a state of chronic congestion; there is opacity of the lower half of the cornea from alteration of its epithelium, with corresponding obscuration of the pupil; the iris is of a dull-brown colour, with no remains of brilliancy, and is partially adherent to the capsule of the lens; and lymph has been thrown out into a rather contracted pupil, giving rise to spurious cataract. There is no evidence either of wounds in the neighbourhood of the foramina, through which the two divisions of the ophthalmic nerve make their exit from the skull, nor of disease of the brain, the motions of the muscles of mastication are perfect, so is the sense of hearing and of taste in the affected side. The light colour of the skin is not owing to eruptive disease, and the sensations and motions of the left part of the face are perfect. The temperature of the right cheek is 88° , of the left $82\frac{1}{2}^{\circ}$; of the right eyeball $88\frac{1}{2}^{\circ}$, of the left 90° ; of the right canthus 92° , of the left 93° ; the temperature of the room $81\frac{1}{2}^{\circ}$ Fahrenheit.

Among other clinical comments upon this case Dr. Archer has the following:

"A peculiar feature of interest in this case is the demonstration which it affords of the intimate relation that exists between the æsthetic and nutritive functions of the body. In the present

case the nutritive functions, in all the anæsthetic parts, have been in some way or other, interfered with. There was loss of colour and brilliancy of the iris, with exudation from its capillaries, causing adhesion of its posterior surface with the anterior capsule of the lens. This may be called a sort of low adynamic iritis. There is passive congestion and varicosity of the conjunctiva, and there is evident malnutrition of the cornea. There has been no sensible perspiration from the anæsthetic skin, although at times every part of the left side of the face was seen bathed in the secretion. But what is most remarkable has been the disappearance of the pigment from the rete mucosum. This fact has hitherto, I believe, not attracted the attention of physiologists, that even the deposition of pigment in the rete mucosum, removed as this layer of the skin seems to be from nervous influence, is dependent upon the proper performance of functions of the subjacent sensory nerves. So remarkable has been the disappearance of the pigment from the skin, coexistent with, and coincident to, the anæsthesia, that it has latterly become a useful guide to us in tracing the progress of the disease. As you see in the patient, pigment has disappeared beyond the median line on the left side, and those parts, on examination, have been found to have become anæsthetic, most probably not by a general affection of the left ophthalmic nerve, but only by continuity of surface, the disease attacking only the terminal filaments of the nerve. Moreover, if you narrowly observe the man's face, you will see upon the malar and upon the temporal bone two dark patches which have not lost pigment, and which are not anæsthetic spots. These are not supplied by the ophthalmic, but by filaments from the middle division of the fifth.*

"As sensation is returning to the surface of the eyeball and skin under the treatment indicated above, absorption of the deposit in the cornea is going on in a remarkable degree; more than one half of the nebulous deposit is already absorbed, and this without the aid of any local stimulus to the eye, which has been purposely abstained from, in order that the manifestations of returning sensation and normal nutrition from general treatment may be the better observed; the absorption of that portion of the false cataract in immediate relation to the pupillary margin of the iris is likewise taking place; we cannot hope for the central portion being absorbed, as absorbents have not been discovered in that situation. The patient is now enabled to distinguish the passage of dense objects before the eye.

"To conclude, I have endeavoured to point out to you that, not only does loss of common sensation depend on anæsthesia of the fifth pair of nerves, but loss of proper nutrition, loss of the pigmentum nigrum, loss of sensible perspiration, and loss of animal heat."

* The altered organic functions of the affected parts, evidenced by arrest of perspiration and non-secretion of the cutaneous pigment, may, however, depend on the implication of branches of the sympathetic nerve, bound up with the involved nerve of common sensation.

ART. 41.—On Paralysis arising from the use of Drastic Purgatives.
By M. HERVIER, Surgeon to the Hospital at Rive-de-Gier.

(*Montpellier Médical*, No. 2, 1861; and *Gaz. Heb. de Méd. et Chir.*, May 10, 1861.)

In his experiments upon animals with drastic substances Orfila noted paralysis among the symptoms produced, and veterinary surgeons are well aware that the frequent use of purgatives will not unfrequently bring about weakness or actual paralysis in the hinder limbs of the horse. M. Hervier has himself seen, along with M. Pitiot, a veterinary surgeon residing in the same town, a glandered horse which was affected with paraplegia for fourteen days after a dose of sixty grammes of aloes. The other cases which have come under the notice of the author are three in number, and they are worth remembering, though cases of the kind are common enough in various medical writings.

CASE 1.—In this case the patient, a blacksmith, with a view to relieve himself from some obstinate dyspeptic symptoms attended by constipation, took six bottles of a quack medicine called elixir of Guilié. This gave rise to numerous bloody stools, with violent colic, and with erratic pains in the back and loins, &c. Very speedily the patient had convulsive startings in the legs, with very sensible loss of power, standing and walking being altogether impossible without help. These symptoms succumbed under the persevering use of electricity, and he was able to resume his work after an interval of some months.

CASE 2.—This case was that of a young man who had become paraplegic after having been induced by some quack to swallow a pint of colchicum wine for the cure of a long-standing gonorrhœa. The immediate effects of this poisonous dose were sero-sanguinolent purging, tinglings and cramps in the legs, with marked loss of power, retention of urine, &c. A fortnight later the sensibility of the legs remained intact, but the power of moving them was entirely lost. In this case three electrical *séances* served to bring about a cure, after various other measures had been tried without avail.

CASE 3.—This case is less satisfactory. It is that of a person who became affected with hemiplegia after having been in the habit for some time of taking strong purgative medicines of a secret character.

The speculations of M. Hervier as to the *modus operandi* of the supposed agent in these cases possess no novelty.

ART. 42.—On the treatment of Sciatica by cauterizing the external ear.
By Dr. G. FUICO, of Padua.

(*Gaz. Méd. Ital. Lomb.*, Nos. 39-41, 1861; and *Gaz. Heb. de Méd.*, Jan. 25, 1861.)

M. Fuico writes with a view to revive this old mode of practice, of which he is an enthusiastic admirer. Out of 48 cases treated in this manner, he says that 30 were cured in a few days, and almost always by a single cauterization, that 10 were materially benefited, and that the remaining 8, in which no good resulted, were all complicated and gravely aggravated cases. Among the cures only three relapsed and required a second application of the cautery. It is right to say,

however, that Dr. Fuico did not confine himself to the use of the cautery, and that his patients, with one single exception, were first of all subjected to a "*traitement débilitant, tant local que général*," more or less energetic, and that frictions, with an ointment containing belladonna and mercury, were scarcely ever omitted, both before and after the cauterization.

ART. 43.—*On an organic lesion of certain Nervous Centres not previously recognised.* By Dr. A. JOIRE.

(*Annales Médico-Psychol.*, April, 1861; and *Med. Crit. and Psych. Journ.*, July, 1861.)

"This lesion," says Dr. Joire, "has its seat on the internal surface of the cerebellar ventricle (fourth ventricle), and consists in the presence of a *seemingly gelatininous transparent layer* of variable thickness, amounting sometimes to a millimètre; *the surface of this layer is covered, especially on a level with the anterior and inferior coat of the ventricle, with a considerable number of salient papillæ or granulations*, exactly analogous to the pimples of the skin manifested under the influence of cold, and designated by the name of goose-flesh.

"I have observed that in subjects who succumb at an early period after the appearance of general paralysis this additional layer is very thin, the granulations of the surface infinitely more numerous and smaller, and their aspect gives the idea of scattered grains of sand, or, better still, the particular alteration of the palpebral mucous membrane indicated under the name of granulations of the conjunctiva. This lesion, which I have called *granulations of the walls of the fourth ventricle*, is constant in general paralysis, and has no other seat.

"I have carefully observed, in my microscopic researches, the walls of the lateral ventricles and those of the third ventricle; I have not met with anything there of a similar nature.

"I do not propose to raise here the important question which might be evolved in the study of the relations between the lesion I have just pointed out and the symptomatic manifestations which I attach to it; neither do I propose to examine whether this lesion may be manifested in the encephalon separately, or whether it is connected with the previous existence of a more general alteration of the brain, whence may depend the disorder of the intellect; a complete work, embracing the study of these various questions, accompanied by observations made with reference to this subject, will shortly be communicated to the Academy.

"My object at this moment is to point out an organic change peculiar to general paralysis to which, up to the present time, attention has not been directed, and to solicit of my alienist colleagues researches which I feel sure will prove confirmatory of my assertions."

ART. 44.—*Cases of disease of the Pons Varolii.*

By Dr. WEBER, Physician to the German Hospital at Dalston.

(Proc. of Roy. Med. and Chir. Soc., May 14, 1861.)

CASE 1.—This was that of P. S.—, æt. 25, affected with tubercles of the lungs. In March, 1854, vertigo and weakness of the limbs of the right side were observed, without alteration of sensibility. In June the paralysis of movement in the right arm and leg was increased, in addition to which imperfect anæsthesia in the left side of the face and tongue was noted, as also contraction of the pupils, especially the right. In July, after bodily exertion and drinking, rapid increase of the motor paralysis in the limbs of the right side took place, followed by contraction and rigidity in the same, and also by diminution of sensibility. The limbs of the left side became likewise weaker; mastication, deglutition, and articulation defective. The sensibility in the right side of the face remained unaffected; in the left as mentioned before. On July 24th a paroxysm, of vertigo and convulsions, with only momentary loss of consciousness, but with permanent loss of power of articulation, deglutition, and protrusion of tongue. The paralysis of the limbs of the right side was complete, of the left almost so; there was anæsthesia in those of the right, distinct diminution of feeling in those of the left side. Reflex function of limbs not quite destroyed. Both pupils contracted. Death eighteen hours after seizure, under the phenomena of paralysis of respiration.

Post-mortem.—In the substance of the left half of the pons Varolii, in close proximity to the superficial origin of the left quintus, a tubercle of the diameter of half an inch was found, with softening of the surrounding tissue, extending posteriorly almost to the floor of the fourth ventricle, and towards the right side beyond the middle line. Hæmorrhage into the softened tissue. The left trigemnus thinner than the right. Three periods can be distinguished in this case. The first, from the commencement of the head symptoms until July 8th, corresponding to the growth of the tubercle in the lower part of the left half of the pons, pressing on the peripheric portion of the left quintus. The second, from July 8th to July 24th, rapidly increasing softening in the neighbourhood of the tubercle, extending to the posterior layers of the left half of the pons, and also into the tissue of the right half, being the anatomical conditions of the period. The third period, beginning with the convulsive attack on the 24th, and comprising the last eighteen hours before death, is connected with the hæmorrhage into the softened tissues, disturbing by pressure also the adjacent healthy parts.

CASE 2.—C. L.—, a boy, æt. 7, affected with chronic hydrocephalus and tubercles of the lungs, had first, towards the end of May, 1856, attacks of convulsions in the left arm, without loss of consciousness; later, the convulsions also attacked the left leg. In the beginning of July vertigo was frequently complained of, and about the same time also pain in the right half of the face, especially the teeth, the convulsive attacks in the limbs of the left side having become more frequent. Towards the end of the same month contraction of the pupils was remarked, and in August weakness and wasting of the left arm and leg, without alteration of sensibility. In September the motor paralysis of the limbs of the left side became increased, the convulsions fainter; the pain in the right side of the face became diminished, and was succeeded by anæsthesia. The left pupil was more contracted than the right. In October there were attacks of violent shaking of the whole body, without impairment of consciousness. In the second half of November difficulty of articulation and deglutition occurred; irregularity of breathing during sleep;

contraction of the paralysed limbs. Towards the close of the first half of December the symptoms of tubercular meningitis supervened (namely, headache, sickness, constipation, diminished frequency and irregularity of the pulse, and coma). Death took place on December 31st, 1856.

Post-mortem.—In addition to the phenomena of tubercles of the lungs tubercular meningitis, with increased amount of fluid in the dilated ventricles, a tubercle, between the size of a pea and that of a small hazel-nut, was found in the lower portion of the right half of the pons, near the right quintus, with atrophy of the latter. The nerve-tissue of the pons surrounding the tubercle was softened, of a yellowish-red colour, exhibiting under the microscope many granule-corpuscles (exudation-corpuscles). The softening did not extend quite to the middle line, and left the posterior layers of the pons unaffected. In this case, again, the phenomena are easily divided into three periods—the first, from the beginning of the convulsive attack in May until the middle of November, the anatomical alteration being a small tubercle in the anterior portion of the right half of the pons, near the peripheric origin of the right quintus; the second period, from the middle of November to nearly the middle of December, anatomically characterised by the red softening of the tissue surrounding the tubercle in the pons; the third period exhibiting the phenomena of tubercular meningitis. In comparing the symptoms of these two cases during the first period, when the anatomical alterations were almost the same in both, we find as principal differences that in Case 2 the limbs of the side opposite to the central lesion were attacked by fits of convulsions previously to their being paralysed; that further, in the same case, pain in the side of the face corresponding to the lesion preceded the anæsthesia; and that the same child had later fits of general shaking, phenomena which were absent in Case 1. These phenomena, witnessed only in one case, may be considered as being not the necessary effect of the palpable local alteration, but due to accessory circumstances—as, for instance, a peculiar disposition, an especial state of irritability in the individual in which they occur, by which disposition the functions of other centres of the nervous system are more easily disturbed, the parts of the brain functionally disordered being frequently more or less distant from those anatomically diseased. There are, on the other side, many corresponding symptoms in both cases; as motor affection, first of the arm, then also of the leg of the side opposite to the anatomical lesion; attacks of vertigo; contraction of the pupils, more so of the one opposite to the tumour; sensitive affection of the face and tongue on the side of the tumour (which, however, is due merely to the relation of the tumour to the fifth nerve); the sensibility of the limbs of either side unaffected, until to the second period, when, in Case 1, anæsthesia came on in those of the side opposite to the lesion; wasting of the paralysed limbs, and later rigidity of the same; at a very late stage only, impaired articulation, deglutition, and respiration; integrity of the intellectual functions and special senses throughout. The physiological inferences which offer themselves are:—1. That the nerve-fibres for the limbs, passing through the pons, as well motor as sensitive, decussate below the pons. 2. That there are no sensitive fibres for the limbs in the anterior (inferior) portion of the pons. 3. That the posterior (superior) portion of the pons contains sensitive fibres for the limbs. 4. That the intellectual functions of the brain, and also of the special senses, are independent of the pons. 5. That nerves regulating the state of the pupils are in close connexion with the pons. 6. That extensive lesion of the pons is associated with disturbance of deglutition, articulation, and respiration. These two cases are of great value, on account of the isolated and limited lesion, and the comparatively slow progress of the disease, allowing

time for repeated observations. The third case corroborates some of the preceding inferences; with regard to others, it is, through its more complicated nature, of no interest.

CASE 3.—E. S—, a female, æt. 49, during the last ten years, subject to privation and cold, during the last six years often affected with bronchitis, was, in September, 1858, suddenly seized with loss of muscular power in the left side of the body, without loss of consciousness, and with only transitory impairment of sensation in the left side. After eleven weeks the paralysis of the left side of the face had almost disappeared; that of the leg was considerably, that of the arm only slightly, improved. On December 30th of the same year the woman lost almost suddenly the power of speaking, swallowing, and protruding the tongue. The right arm was completely paralysed to motion and sensation, the left almost so, and in both legs the motor and sensitive powers were very limited. The reflex function was not quite destroyed. Both pupils were contracted. The consciousness of the patient was unaffected, and remained so until death, but seemed to have been disturbed for a short time in the beginning of the attack. The senses of sight and hearing were free. Dyspnoea and irregularity of breathing, with signs of pneumonia, supervened, and death occurred on January 5th, viz., at the end of the seventh day.

Post-mortem.—Remains of an old clot of blood close to the anterior and exterior portion of the right corpus striatum. Yellow softening, of the circumference of a small hazel-nut, in the centre of the superior portion of the pons Varolii, i.e., in the end nearest to the crura cerebri, the softened tissue exhibiting under the microscope fat-globules and granules of various size, only traces of nerve-fibres, and no granule-corpuscles (exudation-corpuscles).

ART. 45.—*Cases illustrating the causes and effects of Obstructions in the Arteries of the Brain and other Organs.* By Mr. SIBLEY, Lecturer on Pathological Anatomy at the Middlesex Hospital.

(*Proceed. of Royal Med. and Chir. Society, July 6, 1861.*)

The object of this communication is to review a series of cases which had occurred in the Middlesex Hospital, with the view more especially of testing the theory which ascribes these obstructions to the washing away of vegetations, &c., from the valves of the heart. The cases are divided into four groups. In the first group (eleven cases) are placed those instances in which softening of the brain was found associated with a plug in one of the cerebral arteries. In the second group are placed three cases in which there was softening of the brain associated with vegetations on the valves of the heart; but in these instances the state of the cerebral arteries was not ascertained. The third group is formed by two instances of cicatrix of the brain, which the author believed to have been produced by the plugging of a cerebral vessel. In the fourth group are placed ten instances in which there were fibrinous deposits in the internal organs, but in which the brain was not affected with softening. The cases are then analysed. It is found that in twelve out of the fourteen examples of softening of the brain there are fibrinous deposits in the internal organs; the remaining two cases are not complete. It also appeared that, in twelve out of the fourteen cases of softening of the brain there were warty growths on the valves of the heart. In one

of the remaining cases there is extensive atheromatous and calcareous disease of the aorta; in the other, the heart and vessels are healthy, but there is hepatization of the lung. Other points relating to the fibrinous deposits in the organs are also analysed; and this is followed by a comparison of the symptoms in the cases of softening of the brain. The author then proceeds to describe the phenomena which followed the sudden obstruction of an artery. The complete arrest of circulation, the attempt at its restoration, and the reason why, in the cases of the brain, spleen, and kidney, this attempt is not successful. The partially restored circulation is characterised by a zone of enlarged vessels around, and by a low form of inflammation in the part affected. In consequence of this the nutrition of the part is damaged, and fatty granules accumulate among the cell-structures, thus causing the bright-yellow colour which is seen in the so-called fibrinous deposits. As the circulation becomes more complete the more plastic products of inflammation are formed, the yellow colour fades, the bright zone of enlarged vessels slowly disappears, and at length a cicatrix is formed. The paper concludes with a review of the arguments for and against the theory which supposes these fibrinous obstructions to have been washed away from the cavities of the left side of the heart. The author believes that obstructions may be formed in the arteries, or that they may be washed away from the heart; and after describing the mode in which obstructions formed in these two modes are to be distinguished from each other, he proceeds to give the reasons for affirming that in all the cases mentioned in this paper the plugs had come from the heart, from the arteries, or from an inflamed lung. The chief arguments made use of for arriving at this conclusion are—the peculiar appearance and structure of the plugs; their analogous structure to warty growths on the valves of the heart; the situation at which plugs are usually met with; the condition of the artery at the obstructed part; the occurrence of several plugs in neighbouring or distant vessels; the very frequent, or indeed almost constant, association with fibrinous deposits in the spleen and kidney; and, lastly, the arguments which are derived from a consideration of the symptoms of this form of brain disease.

ART. 46.—*A case of imperfect Brain-development.*

By Dr. J. L. H. Down.

(*Proceed. of Royal Med. and Chir. Society*, July 6, 1861.)

In this case the corpus callosum and fornix, the septum lucidum and commissura mollis, were imperfectly developed.

CASE.—The patient, a boy, aged nine years, was an inmate of the Asylum for Idiots, Earlswood, and had been under the daily observation of the author for two years and a half. He was the firstborn of three children, of whom the second (a boy) is also idiotic; the third and youngest (a girl) healthy and intelligent. No consanguinity existed between the parents. Prior to the birth of this child, and also to marriage, the mother had suffered intense pain in the side, caused, according to the opinion of Sir Benjamin Brodie, by renal

oxalite of lime calculus. During pregnancy opiates had been largely resorted to; the parturition was normal. At nine years old, the time of his death, his mental capacity was very limited; he could only say two words, and had scarcely learned anything. A post-mortem examination was made thirty-three hours after death. The encephalon weighed 2 lbs. 8 oz. avoirdupois. The antero-posterior diameter of the cerebrum was $6\frac{1}{2}$ in.; the width $5\frac{1}{2}$ in.; the antero-posterior diameter of each half of the cerebellum was $2\frac{1}{2}$ in.; its entire width $3\frac{1}{2}$ in. The size, form, arrangement, and colour of the convolutions of the cerebrum were normal. On removing the encephalon from the cranium, the hemispheres separated to an unusual extent, without bringing into view the great commissure of the brain. On separating the hemispheres the interiors of the lateral ventricles were exposed, and covering the floor of the interval the velum interpositum appeared, anterior to which, and on the same plane, was a narrow band of medullary structure. The velum interpositum being removed, neither fornix nor septum lucidum could be discovered, nor was there any trace of the commissura mollis. The medullary band, the only representative of a corpus callosum, had anteriorly and posteriorly crescentic thinned margins, and measured at its narrowest part, which was slightly to the left of the mesial line, one third of an inch. At a further stage of the dissection the lateral representatives only of the fornix were discovered. The rudiment of corpus callosum was situated opposite the widest portion of the corpora striata, and did not exceed one sixteenth of an inch at any part of it; its fibres spread out anteriorly and posteriorly on reaching the hemispheres. This was the only case out of fifty brains of idiots examined by the author in which the corpus callosum and fornix were imperfectly formed. Dr. Down refers to similar cases recorded by Messrs. Solly, Paget, and Reil, in which the patients were but little below the average standard of intelligence; and called special notice to the fact that, in those cases, the commissura mollis was present and extra large, while in the present instance it was entirely absent. He suggests that further inquiry would possibly lead to assigning a higher importance to the commissura mollis than had hitherto been attached to it.

(B) CONCERNING THE RESPIRATORY SYSTEM.

ART. 47.—*On the importance of the Functions of the Skin in the pathology and treatment of Pulmonary Consumption.* By Dr. WM. TOULMIN, of Brighton.

(Pamphlet, 8vo, London and Brighton, 1861.)

This pamphlet is a reprint, from the 'London Medical Review,' of a paper originally read before the Harveian Society; and its real object is to recommend the Turkish bath as a remedy in the affection treated of. Dr. Toulmin holds that tubercle is neither a disease of the lungs nor of the air-tubes; that the deposition of the diseased product in the lungs is an accidental circumstance, not arising from disease of these organs, but from deficient oxygenation of the blood; and the general treatment recommended may be gathered from the following aphorisms:

"1st. That by the aid of the hot-air bath all the functions of the skin be kept in healthy action.

"2ndly. That the whole surface of the body be anointed daily

with some oleaginous matter, of which axungia odorized is as good as any other.

" 3rdly. That a local ulceration on some part of the surface be kept always patent, by means of an issue or seton; and

" 4thly. The ringing the changes on cod-liver oil, iodide of potash, the mineral acids, tar creasote and naphtha, iodine and chlorine, iron, arsenic and quinine, and indeed the class of *antiseptic medicines generally*, all of them admirable adjuvants in improving the general health (if selected in conformity with the functions most sympathising with, and reacting on, the disease); but powerless in arresting the specific lesion in question, without the previous 'open sesame' of the hot-air bath, *followed by the aspersion of cold or tepid water*.

" The hygienic treatment, according to my view of the disease, consists in promoting by all possible means (consistent with the strength of the patient) a rapid change of matter, by which two objects are attainable—1st, the absorption of the already deposited tubercle; and, 2ndly, the deposition of more healthy, that is, more highly organized, matter.

" The grand assistance of the hot-air bath consists in clearing the cutaneous pores, and giving them their healthy tonicity, when the patient does, what in many cases he never did before, that is, *he breathes through his skin a large quantity of vital air*, which goes to maintain, *at the point of health*, that metamorphosis of tissue in which life consists.

" The aids to this important result consists in ordering the most nutritious diet, short of alcoholic stimuli; 2ndly, The living in a high, dry, and marine atmosphere, and as much as possible in the open air; and 3rdly, The use of all sorts of athletic exercises suitable to the sex and strength of the patient,* for it is of no use ordering full diet unless we also give air and exercise to convert such diet into pure and healthy blood. To this must be added special exercises for the muscles of the chest and air-tubes, amongst which singing is not to be despised, however little the voice may be attuned to such music.

" It is remarkable how nature appears to cry out for the use of the hot-air bath; witness the rigors, the night perspirations, the eruption at the angles of the mouth, which so often succeeds to a cold, or, in other words, to obstructed perspiration, and which is evidently the exit which nature has provided for the escape of morbid matter. Witness also the artificial eruption which *we* create, and call it 'counter-irritation,' a term without a meaning, invented to answer disagreeable questions, but manifestly producing very beneficial effects of the same nature as the eruption above mentioned. In fact, half the eruptions we witness arise from similar causes, and answer similar ends, and all may be prevented, and cured, by a copious perspiration, kept up for a sufficient length of time, and repeated sufficiently often.

" But perhaps it is the acid perspiration, so well known from its peculiar and offensive odour, and not confined to phthisical patients (although generally indicating a consumptive tendency), that speaks louder than any other symptom as to nature's requirements; and

* Of course avoiding those that accelerate the pulmonic circulation.

there is none other that exemplifies more clearly the invaluable operation of the hot-air bath in withdrawing from the system the morbid matter (lactic acid) that occasions it, and thus enabling the constitution to re-establish the assimilative functions, which are always more or less deranged during its existence."

ART. 48.—*The influence of hereditary predisposition in Pulmonary Consumption* By Dr. W. R. HILL, Physician to the Eastern Dispensary, Bath.

(*Medico-Chir. Review*, Oct., 1861.)

The following remarks are from a careful analysis of 220 cases of pulmonary consumption, observed during a period of twelve months, at the Hospital for Consumption at Brompton :

"This is popularly recognised as of great moment in the development of the disease, and not without good cause, I think, though at what rate its influence must be valued is uncertain, and what the chances are in favour of an individual being attacked who is a member of a consumptive family, independently of other causes, cannot be ascertained with any precision until numerous observations have been made as to the number of members of such families who, *ceteris paribus*, are not attacked.

"Of 213 cases in which a note was taken with accuracy regarding the family history, 100, or 46·5 per cent., had consumptive relatives, whilst 113, or 53·5 per cent., had none.

"This per-centage differs from that given by Dr. Walshe, who says that 26 per cent. of phthisical patients come of a phthisical parent, thus including only cases of direct hereditary transmission, which corresponds with my own *direct* cases, which numbered 49, or 23 per cent.

"The majority, therefore, in my own statistics, being in favour of those free from family predisposition, it would seem at first sight as if the hereditary element was one of which much account should not be taken, but it must be remembered that there are other predisposing causes, and that the exciting causes must therefore act in numerous instances independently of the one we are now considering, which will be plainly seen by a minuter examination of the hereditary influence, inasmuch as in the sex most removed from the influence of other predisposing causes, that of the hereditary taint will be found largely to predominate; thus, of the above-quoted 213 cases, 151 were males, in 63 of whom, or 41·72 per cent., the hereditary tendency was marked, whilst in 88, or 58·28 per cent., there was none; the rest of the number, 62, were females, of whom 37, or 59·7 per cent., had a consumptive family history, whilst only 25, or 40·3 per cent., were free from it; thus showing in females, who may be regarded in a measure as comparatively exempt from some of the causes of phthisis to which men in that class of life are exposed, that the predominance in favour of hereditary influence is as great as 3 to 2 of the male cases.

"It may therefore, I think, be safely argued that, *ceteris paribus*, the fact of family taint increases the probabilities of an individual

being attacked to a somewhat considerable extent; and further, that it increases the probability of individuals being attacked at an earlier age than would otherwise happen, for of an equal number of cases in which there was direct parental disease, and in which there was no family history whatever of consumption, 73·2 per cent. of the former were attacked before the age of thirty, whilst of the latter the disease commenced before the same age in only 58·6 per cent."

ART. 49.—*On the action of Phosphorus in Phthisis.* By Dr. COTTON, Physician to the Hospital for Consumption at Brompton.

(*Medical Times and Gazette*, July 6, 1861.)

The generally admitted tonic and stimulating action of phosphorus, as well as its existence in so many of the important structures of the body, made Dr. Cotton anxious to try its effects upon phthisis. He accordingly administered it to twenty-five unselected in-patients of the Consumption Hospital, those only being excluded in whom the disease was too far advanced to expect that any kind of treatment would avail much, or in whom there existed some gastric or other complication which would seem to render the phosphorus inadmissible.

Of the twenty-five patients, ten were in the first, four in the second, and eleven in the third, stage of consumption. Eleven were males, and fourteen females. Their ages varied from nineteen to fifty-five years. Ten grains of phosphorus and an ounce of oil of sweet almonds were put into a phial, and exposed to the heat of boiling water for half an hour; the solution, when cold, being carefully strained through blotting-paper. By this process, which is that recommended in the Prussian Pharmacopœia, four grains of phosphorus remain in permanent solution. Of this, from five to eight or ten minims were given twice or three times a day, suspended in a little mucilage, and disguised by cinnamon water. Five minims would contain one twenty-fourth of a grain of phosphorus. The dose, according to its effects, was continued for a longer or shorter period, the longest being eight weeks, the shortest one week.

Of the twenty-five patients, four improved *greatly*; five improved *slightly*; and sixteen either made no progress at all, or became worse. Nine gained in weight; twelve lost weight; and four remained unchanged in this respect. In one case the gain amounted to eight pounds in one month; in another to fourteen pounds in two months; but in each of the other cases where there was an increase the gain was trifling, not exceeding one pound.

In eleven instances the appetite sensibly diminished, and in two or three of these cases the phosphorus evidently occasioned gastric disturbance, accompanied by diarrhœa; but in the other fourteen patients the appetite remained good, and in some of them actually improved under the treatment.

Of the four *greatly* improved cases, one (in the first stage of the disease) quite regained his health; and the other three (two of whom were in the first, and one in the third, stage) left the hospital materially improved in every respect, their coughs having diminished, and their

general health being greatly restored. Of the five *slightly* improved, some gained a little in weight, but three at least of them seemed to profit more when the phosphorus was exchanged for steel and quinine. Of the sixteen cases apparently uninfluenced by the phosphorus, several improved under the subsequent use of other tonics.

The observations of Dr. Theophilus Thompson, upon the use of phosphorus in phthisis, are far from encouraging. He believed that, in some instances, it might act favorably as a stimulant, but that its effects even in such cases were transient. Dr. Cotton is not aware of any other published record of the influence of this substance in any of the varieties of tuberculosis.

All things being considered—the fact that improved diet, diminution of care, and quietude, are of themselves sufficient to effect a very great improvement among the patients at the Consumption Hospital, especially on their first arrival, the author cannot help coming to the following conclusions, viz. :

1. Phosphorus exerts no *specific* action upon consumption.
2. In some cases it seems to act as a tonic and stimulant; but its influence, even in this respect, is inferior to many other remedies of a similar kind.
3. Although in many cases it seems to agree very well with those who take it, yet it sometimes occasions loss of appetite, nausea, and abdominal derangement.

ART. 50.—*A clinical report on the treatment of Phthisis by Chlorate of Potash.* By DR. AUSTIN FLINT, Professor of Medicine in the Bellevue Hospital Medical College, New York, &c.

(*American Quarterly Journal of Med.*, Oct., 1861.)

The facts presented in this report lead Dr. Flint to the following conclusions :

"1. Of fourteen recorded cases of phthisis in which the chlorate of potassa was given in sufficient doses (\mathfrak{zss} *per diem* in eleven, and \mathfrak{ziii} *per diem* in three cases), and for a sufficient period to test its remedial power, in nine the histories afford no evidence of any salutary influence from the remedy; in four cases the circumstances render it doubtful whether much, if any, influence was fairly attributable to the remedy, and in one case only is there room for the supposition that the remedy was highly beneficial. These cases, therefore, fail to furnish proof of any special efficacy in this remedy to arrest or retard the progress of the disease.

"2. Inasmuch as in all these cases, save one, the quantity of tuberculous deposit was large or abundant, and in nearly all the disease had existed for a considerable period, it remains to be ascertained by further clinical researches whether different results may not be obtained by the use of the remedy in a series of cases in which the quantity of deposit is small and the previous duration of the disease short. In collecting such cases, accuracy of diagnosis is, of course, essential, and this can only be secured by the evidence afforded by physical signs in conjunction with the previous history and present

symptoms. It may be added, in arriving at the conclusion that this remedy possesses no special influence in phthisis, it does not follow that it is not in a certain number of cases useful. By a special influence is meant a power to control, to a greater or less extent the pathological processes which belong to this disease; a remedy may fail to do this, and yet be beneficial, as are a diversity of tonic remedies in cases of phthisis.

"3. The chlorate of potassa may be given in cases of phthisis to the extent of half an ounce *per diem*, with entire impunity, and without occasioning any unpleasant symptoms. It does not produce diarrhœa, and may be well borne when diarrhœa is present in cases of phthisis."

ART. 51.—On the use of Chlorate of Potass as a corrective of Fœtor of the Breath. By M. ———.

(*Bull. Gén. de Thé.*, July, 1861; and *Edinburgh Medical Journal*, Sept., 1861.)

Many persons complain of having bad breath, although their teeth are quite sound and due care is taken of them, and although the mucous membrane of the mouth and the gums are perfectly healthy. The disagreeable odour may in these cases proceed from the lungs or the stomach, though in nine cases out of ten it arises from the stomach. In such cases the following is a simple, prompt, and certain remedy. Three hours after meals, a teaspoonful of the following mixture should be taken :

Chlorate of potash	.	.	ʒiiss.
Sugar and water	.	.	ʒiv.

The mouth should likewise be washed with the solution.

ART. 52.—Coffee as a remedy for Hooping-cough.
By Drs. ———

(*Boston Med. and Surg. Journal*, May 15, 1861; and *Amer. Quart. Jour. of Med.*)
Science, July, 1861.)

The editors of the first-named journal say that they have tried strong coffee (recommended some years ago as a specific in this complaint by M. Jules Guyot) in several cases of hooping-cough with marked benefit.

"In one case the patient being a little girl, six years of age, there was not a single 'whoop' after she began to take it. She took a table-spoonful and a half of very strong coffee, sweetened, but without milk, three times daily. A younger child, in the same family, was well of the disease in three weeks; no other remedy was used in either case. In another instance, in which we have recently tried it, the same happy result followed, the 'whooping' symptom being at once arrested, and the complaint coming to a speedy termination. It is difficult to fix the dose definitely, and this may account for the unsatisfactory result in one or two instances we have heard of in which a small dose was given. Another important consideration, which should not be lost sight of, is that three quarters, probably, of what is drank for coffee

is made from nothing but peas or beans. The only sure method is to get the coffee-berry itself, and have it burnt and ground under one's own eye. The decoction should then be given as strong as possible, and in a quantity only short of enough to cause the unpleasantly stimulating effects of this beverage. Children take it very readily. The last patient referred to above was only eighteen months old, and took once a day half a cup of coffee thus prepared, without the least noticeable injurious effect."

ART. 53.—*Observations on the result of treatment of nearly 100 cases of Asthma.* By Mr. T. L. PRIDHAM.

(Pamphlet, London, Churchill, 1861, pp. 62.)

This pamphlet is a reprint of a series of papers in the 'British Medical Journal,' in which is recorded a number of cases in which the treatment pursued was attended with very satisfactory results. This treatment, as it appears to us, is not altogether original: it is—"not to give the stomach more to do than it could well accomplish; nor to dilute the gastric juices by fluids before or soon after eating, but to allow them to perform alone their proper functions; and to quiet the nerves of the stomach by means of a mild sedative, which prepared it for the due performance of the office of digestion."

Extract of henbane, conium, belladonna, and stramonium, are the sedatives recommended. The following case is a fair sample of its companion cases.

CASE.—This case is that of a gentleman in London, who, on January 15th, 1859, writes to me thus:

"I have long suffered from that most distressing complaint, asthma, which during the winter months unfits me for everything; in other respects, I am in tolerable health; my age is sixty-seven. I have continual cough and most profuse expectoration of a thin, frothy character; and for hours together I breathe as it were through a hookah; I can get no relief, and I can assure you my sufferings are most distressing. I feel the greatest difficulty in drawing my breath in the morning before I get rid of my expectoration by violent fits of coughing; on going up the slightest ascent I feel the greatest difficulty. Having given you these particulars, will you kindly tell me if you think you can give me any relief, so that I may be able to attend with any degree of comfort to my calling, which has been for forty years of a most exciting nature, as all men know who have to do with the Stock Exchange. I am prepared to make any sacrifice with a tolerable prospect of getting relief."

Some few days afterwards, he visited me; and, in addition to the previous history of his case which he had given, I learned that he had been afflicted for many years with asthma, as those who frequented the Stock Exchange could testify, for his distress of breathing and anxious countenance were the theme of many whilst transacting business or in conversation with them. Still his natural energy had carried him through his daily avocations up to the present time, but with increasing years he felt that life was becoming daily more insupportable. His appearance when I first saw him bore the marks of a confirmed asthmatic. He was tall, with a large frame, bent forward not so much from age as from the position which he was obliged to assume whilst on his feet and frequently during the greater part of the night; his shoulders

were greatly raised; his eyes protruded considerably, and the conjunctivæ were much suffused; the tongue was thickly coated and chapped; the breathing was oppressed and painful; expectoration was considerable and frothy; the chest was emphysematous nearly through its whole extent; the bowels were irregular and costive; the urine was loaded with lithates; pulse 96; the heart was normal, but feeble in its action; his appetite was precarious, and he had much flatulent distension of the stomach and bowels. He usually ate largely of soups, made dishes, and pastry, in addition to more solid food, and drank his beer and wine liberally. His distress, he said, was always the most after a full meal, and his nights were wretched. It was evident that, in addition to his usual dyspeptic asthma, he was now suffering from bronchitis also, from exposure to a draught during his journey. I therefore commenced giving salines with nitrate of potass, and counter-irritants; knowing full well by experience that it is useless to place a dyspeptic asthmatic patient under specific treatment until all *inflammatory* action of the chest has subsided, which having been accomplished, I then placed him on the sedative and strict dietary system, allowing him, in addition to six ounces of bread daily, four ounces of animal food without fat or skin. He was allowed green tea, coffee, and weak brandy and water *ad libitum*, provided the liquids taken did not interfere with the digestion of the animal food. His meals were ordered to be given with the greatest regularity, at the hours of eight a.m., one p.m., and seven p.m.; the bowels to be regulated by means of four grains of the compound aloetic pill, and a simple enema after breakfast if it should be required. In addition, four grains of the extract of conium were ordered to be taken four times a day, at the hours of seven a.m., twelve noon, five p.m., and ten p.m.

Here I may remark that the greatest punctuality is required as regards taking food as well as medicine. The bowels should also be acted on immediately after breakfast, either naturally or by means of an enema; in fact, success greatly depends on the regularity with which all the functions are performed. Care should be taken also to rest the body and mind for an hour after eating animal food.

All these regulations having been fully carried out by my patient, he writes on February 14th from London, just a fortnight after his return home:—"I continue to progress satisfactorily, and am quite relieved of inconvenience. When in bed my cough seems to be now approaching to what I generally experience during the summer season."

On April 4th, he wrote:—"I am well enough to be off to Paris to-morrow. I assure you, I continue to experience the most satisfactory results from your treatment. By your permission, I take an egg with my breakfast, and a glass or two of sherry two hours after my dinner, and I find myself all the better for it; in other respects, I do not deviate from your prescribed treatment. I now find no walk too long for me, and except a little cough in the morning I have nothing to complain of."

On March 17th my patient writes:—"I have very great cause to be thankful for my visit to Bideford. I am nearly free from my distressing cough with which I have been so painfully afflicted for so many years, and particularly at this season. I still persevere in following most minutely all your instructions; I greatly enjoy my glass of porter which you have allowed me at eleven o'clock, in addition to my sherry and water at four."

On April 15th he wrote:—"From the severity of the weather, I have taken a severe cold; however, my cough is nothing when compared with the sufferings I formerly experienced at this season of the year; I do not get any fits of asthma now. I find it absolutely necessary to keep my bowels as regular

as possible; as, if they do not act regularly, I am sure to be reminded of it. I am greatly improved in condition, and am equal to almost any amount of fatigue."

Shortly after my last communication, I had occasion to visit London, and found my patient in the enjoyment of comparative health and comfort. I strongly advised him to give up his anxious and exciting mode of life, and seek amusement, if it were possible, in country life, which he promised me to do. Since this time I have not heard from him. I think that in this case it must be admitted that success attended the treatment adopted, inasmuch as a life of constant suffering became one of comparative ease and enjoyment.

ART. 54.—On the use of Anti-herpetic Remedies in Asthma.
By M. DUCLOS.

(*Bull. Gén. de Thér.*, 1861; and *Journ de Méd. et Chir.*, June, 1861.)

In this paper M. Duclos endeavours to demonstrate that *idiopathic* asthma is one of the manifestations of the herpetic diathesis, and that the remedies, applicable to the latter are productive of benefit in the former.

The elements of this medication are flour of sulphur, issues, and Fowler's arsenical solution.

M. Duclos prescribes for asthma 8·15 grains of flour of sulphur daily, according to the age of the patient, in one dose, in jelly or in some liquid, fasting or at breakfast. This dose should be persevered in during twenty days, for five or six months, and subsequently for one or two years for two days only in every month. If the sulphur induces any aperient effects, they can readily be corrected by the addition of a little opium.

This simple measure, says M. Duclos, is successful in very many instances. Should, however, the disease not yield, a permanent issue and arsenical preparations, amongst which he more especially prefers Fowler's solution, should be resorted to.

Two drops, morning and evening, of this preparation are taken, and the dose is gradually increased to six drops, morning and evening, for twenty successive days. The stomach in general becomes rapidly accustomed to the medicine, which seldom requires the addition of any sedative agent. After having been persevered in for three months, the remedy is discontinued for one entire month, and temporary interruptions in its administration are sometimes necessary in the course of the treatment, if the patient complains of the effects of the arsenic. Thus exhibited, the medicine presents no danger, and in more serious cases, refractory to the agency of sulphur, M. Duclos considers arsenic the safest prophylactic for asthma, of course when unconnected with organic disease of the lungs or heart.

M. Duclos views asthma in the light of a *bronchial psora*, but although this theory is alluring by its simplicity, the irregular and capricious progress of the disease militates against it.

(C) CONCERNING THE CIRCULATORY SYSTEM.

ART. 55.—*Case of obstruction of the Superior Vena Cava at its termination in the Heart.* By Dr. G. OWEN REES, Physician to Guy's Hospital.

(*Guy's Hospital Reports*, 3d series, vol. vii, 1861.)

This case is very remarkable, and probably unique in its characters.

CASE.—Elizabeth L—, æt. 48, admitted under Dr. Rees, October 6th. A married woman. Always enjoyed good health until four months ago, when she experienced some difficulty in breathing. Her face then became congested, and the dyspnœa and congestion have increased up to the present time.

On admission, the nature of the affection was tolerably evident; the patient sitting up in bed, with her face bloated and red, her eyes protruded, and her arms hanging at her sides, swollen and congested; the lower part of the body, at the same time, preserving its natural condition. In a few days, however, the legs also became œdematous. On examination of the chest nothing abnormal could be heard in the action or sounds of the heart; but the right side was very dull on percussion, and gave evidence of the presence of fluid.

Post-mortem examination.—The right side of the chest contained fluid, and the lung was compressed against the spine. No tumour, nor any disease external to the vein could be discovered, and the cause of obstruction was not seen until the heart and vessels were removed and closely examined. When this was done it was seen that the *superior cava* and its branches were obstructed by fibrine, the orifice of the vessel being completely closed. There was also a considerable narrowing of the orifice of the *inferior cava*. On opening the right auricle the endocardium presented an exceedingly diseased appearance, the surface being rough, and raised by thickened patches of fibrous material beneath it; this was especially the case near the termination of the veins, and towards the site of the upper one a general puckering in a radiated form had taken place, but the depression in the centre corresponding to the superior cava was quite closed. Beneath this the opening of the inferior cava appeared in progress to the same condition, its mouth being very irregular in shape, and scarcely half the natural diameter. The superior vena cava, together with the brachio-cephalic vein and the terminations of the jugulars and subclavians, formed tough, rigid, solid cords. The fibrin within was evidently of old date, being very tough, and closely incorporated with the walls of the vessel. There was no thickening of cellular tissue around the vein to indicate inflammatory action without, nor on cutting through the walls of the auricle was any adventitious material observed to throw any light on the cause of the obstruction, the disease apparently originating in some obscure morbid process occurring on or near the surface of the auricle itself.

ART. 56.—*Case of Rupture of the Coronary Artery.*
By Dr. HARLAN.

(*N. American Medico-Chir. Rev.*, March, 1860.)

CASE.—A sailor, æt. 22, was admitted into the Pennsylvania Hospital on the 2nd of December. He stated that he had been taken sick six or eight

weeks ago at Havanna, that no physician had seen him, but that his captain had pronounced the disease to be yellow fever. He never left his berth until the vessel came to port, when he was carried immediately to the hospital.

At the time of his admission he was much debilitated, complained of difficulty of breathing and a feeling of constriction across the chest; he had a frequent, feeble, and very irregular pulse; his bowels were costive, and his appetite poor. His lips were purple, and his skin was cold and damp. The area of dulness on percussion over the heart was much increased; the sounds of the organ were scarcely audible. There was dulness over the back of the chest, and egophony. His face was a little puffy, and there was some anasarca of the lower extremities.

In the course of a few days vomiting occurred, accompanied with epigastric tenderness and almost fatal prostration; it yielded temporarily to remedies, but recurred on several occasions, and each time left the patient more debilitated. The pericardial and pleural effusion continued to increase, and with it the dyspnoea and prostration. He died quite suddenly on the morning of December 19th, seventeen days after his admission into the hospital. A few minutes before death he took some wine from the nurse, who did not notice any change in his appearance.

Autopsy.—When the thorax was opened, the pericardium appeared to occupy nearly the whole of the left side, entirely concealing the left lung, which was compressed by it. The pleura contained a pint and a half of reddish fluid, but presented no signs of recent inflammation. The pericardium contained twenty ounces of a similar fluid and half a pint of firmly coagulated blood. There was no rupture of any of the cavities, and the great vessels at their origin were sound. The pericardium was much thickened, and both its cardiac and reflected surfaces were nearly covered with an abundant deposit of coagulable lymph. The right side of the heart was attached to the pericardium by fibrous bands. At the base on the left side the marks of inflammation were most decided, the coating of lymph was thickest there, and the muscular tissue was softened; at one point there was a depression, presenting the appearance of a ragged ulceration, and containing a piece of a clot. A probe passed gently into the coronary artery came out at this point, and, on cutting down upon it, the artery could be plainly seen to open directly into the pericardium.

ART. 57.—*Thrombosis of the Pulmonary Artery and Pleurisy on the left side.* By M. MALMSTEN.

(*Trans. of the Swedish Soc. of Phys. Hygiene*, Oct., 1859; and *Dublin Medical Press*, May 22, 1861.)

CASE.—John Richard Holmberg, a servant, æt. 22, was admitted into the medical division of the hospital on the 9th of September, 1859.

The patient states that he always enjoyed good health until some days ago, when he began to be troubled with a peculiar sensation of oppression over the superior parts of the chest, which increased on exertion and violent movements, and distressed him the more, as he had never before suffered from dyspnoea or cough, but could with ease perform the hardest work. Soon slight stitches in the left side and occasional but inconsiderable cough supervened. There was little disturbance of appetite or other functional derangement, and the patient continued to get up. He consulted me on the 7th of September, and as I could make no other diagnosis than incipient

slight pleurisy of the left side, but could not account for the oppression of the chest, I advised him to allow himself to be cupped, and to keep quiet. Four glasses were accordingly applied around the base of the left side of the chest. His state, however, continuing unchanged, I recommended him to come into hospital.

Status præsens on the afternoon of the 9th of September.—The patient is strongly built, of good complexion, and healthy appearance. He lies on his back, and readily answers all questions put to him. The oppression of the chest already remarked continues, it is little observed in the recumbent position, but is increased so soon as the patient sits up. The stitches have disappeared; the cough is inconsiderable and at long intervals; there is no expectoration. The respiration is somewhat but not much hurried. The sound on percussion over the whole of the right lung is full and clear, as well as over the anterior parts of the left side of the chest. On the posterior surface and in the lateral region of the left side, on the contrary, the sound on percussion is dull from the base of the thorax about three inches upwards in the former and about four inches in the latter part. Elsewhere percussion yields a clear sound on this side also. In the parts now enumerated the respiratory murmur is vesicular, but weak and distant, and the vibration of the voice is there slighter than in the corresponding parts of the right side. Everywhere else the respiratory sound is quite distinct and vesicular. The cardiac dulness occupies a rather more than normally great extent to the right beneath the sternum. The heart's impulse is observed between the fifth and sixth ribs quite near to the nipple. Along the left edge of the sternum both cardiac sounds are accompanied with a superficial, soft, blowing, accessory sound, which is most audible midway between the apex of the heart and the margin of the sternum. To the left the intensity of the accessory sound gradually diminishes, so that near the axilla both heart-sounds are heard quite pure and clear. The accessory sound is not transmitted into the carotids. The pulse is full and soft, easily compressible, about 80. There is nothing remarkable in the abdominal organs. Fomentations. Morphia at night.

At eight o'clock a.m., September 10th, the patient's state was much the same. The above-mentioned accessory sound had considerably diminished in intensity, and now accompanied only the first cardiac sound. The physical signs of effusion in the left pleural sac remained undiminished. Iodide of potassium. A blister.

On re-examination, at six in the afternoon, only a slight indication of the accessory sound was perceptible, accompanying the first cardiac sound at the left margin of the sternum between the fourth and fifth ribs. Both cardiac sounds were clear and distinct, the pulse was unchanged. The patient was tranquil; the oppression had not increased. During the night he was observed to sleep well, and on awaking on the 11th of September, he made no complaint as to his state, but on sitting up at a quarter-past six in the morning on the edge of the bed to have the bedclothes changed, he suddenly sank, without uttering a sound, and lost consciousness. His face became death-like pale; his lips and *alæ nasi* cyanotic; his breathing short, laboured, and panting. He tore and pulled convulsively with both hands the coverings of his chest, as if to lift from it some oppressive weight, and died after a quarter of an hour's agony.

On the post-mortem examination, which was performed twenty-six hours after death, the right lung and the upper lobe of the left were found free, but the posterior and lateral parts of the left lower lobe were attached by fresh adhesions to the thoracic wall, and were compressed and congested. The

right pleural sac was empty, the left contained about a pound of fluid and flaky exudation. In the pericardium were found some tablespoonfuls of clear serum. The heart was particularly flaccid, and somewhat enlarged. The capacity of the left ventricle was normal; its walls were somewhat thinner than might have been expected from the size of the heart and of the body and the age of the deceased. The right ventricle was dilated; its walls were somewhat thickened. All the valves and orifices and the endocardium were sound. The left ventricle was empty; the right contained besides thickened blood a not inconsiderable firm fibrinous coagulum, lying quite loosely in its cavity. This coagulum was continued through the pulmonary artery into its minutest ramifications. In the trunk of the pulmonary artery the coagulum in question lay loose and free from the vascular wall; but from the two principal branches the greater part of their ramifications were plugged with uninterruptedly coherent, highly coloured fibrinous cords, softer in the middle, firmer in the outer parts, which had everywhere attached themselves most intimately to the vascular wall, so that it was only by careful dissection they could be separated from it. Nowhere could any actual softening of these plugs be observed. The pulmonary veins and their branches contained only a small quantity of fluid blood. The parenchyma of the lungs contained less blood than usual, and was perfectly healthy. The trachea and bronchi were empty. The aorta throughout its whole extent was unusually narrow, otherwise it was healthy. In the brain and in the abdominal organs there was nothing remarkable except very decided and universal hyperemia.

M. Malmsten considered the foregoing case to be in many points of interest. During life M. Malmsten had not been able to account for the great oppression of which the patient complained, for the pleuritis was insufficient to explain it. The accessory sound which accompanied the cardiac sounds seemed at first to indicate the existence of slight pericarditis. The unexpectedly sudden death suggested the possibility of the presence of an aneurism, although against this view was the fact that during the summer the patient had undergone drill without the least inconvenience. M. Malmsten likewise suspected the possibility of thrombosis of the pulmonary artery, which not unfrequently causes sudden death, but against this was the fact that the patient had been healthy until he now took ill, and that none of the diseases favorable to coagulation of the blood preceded or accompanied his illness. The post-mortem examination, however, fully justified this suspicion, and with the exception of the pleuritis and the above-described coagula in the pulmonary artery, exhibited no particularly morbid conditions. In reference to this case M. Malmsten alluded briefly to Virchow's investigations respecting obstruction of the pulmonary artery and its consequences, as well as to Klinger's paper in '*Viertel's Archiv*,' 1855, "*Beobachtungen ueber die Verstopfung der Lungenarterie durch Blutgerinnseln*," and quoted from the latter a case having much resemblance to that just related, inasmuch as it was one of a previously perfectly healthy individual. M. Malmsten had certainly seen many cases of plug-formation in the pulmonary artery, but in them other morbid predisposing conditions existed, such as the puerperal state with previous thrombosis in more peripheric veins, or pyæmia, anæmia, &c. As to the question in what relation the pleuritis stood to the thrombosis in the pulmonary artery,

M. Malmsten would not venture to give a positive opinion, further than that the thrombosis could not be supposed to be secondary to so inconsiderable a pleuritis. The cause of the plug-formation itself is difficult to assign, unless the state of the heart and aorta could contribute to its formation. The accessory sound which was observed was probably due to the coagulum present in the right ventricle, although it is impossible more exactly to decide that point. M. Malmsten further showed how such a sudden death might in a medico-legal point of view be difficult of explanation, if, for example, the examination did not take place until a considerable time after death.

ART. 58.—*On the harmlessness of Air accidentally entering the Veins after Bleeding.* By M. A. REY, Professor of Clinical Medicine in the Veterinary School at Lyons.

(*Gaz. Méd. de Lyons*, No. 4, 1861; and *Gaz. Hebdom.*, Juillet, 1861.)

By experiments upon horses, M. Rey has been led to think that the fears generally entertained about the entrance of air into the veins after bleeding are not a little exaggerated, at least in the case of the lower animals.

When the jugular vein of a horse is opened without afterwards arresting the flow of blood by pinning the vessel, there is frequently, for hours after the operation, a gurgling noise, which shows very plainly that air is entering through the wound, and yet there is no evident disturbance in the general health of the animal. This is one experiment: another is still more positive. When, after bleeding, air is blown into the jugular through a tube, and the opening then closed, it is generally held that immediate death is inevitable. M. Rey maintains the contrary, and says that if the air blown in is in moderate quantity it does not entail any very conspicuous disturbance in the circulatory, and respiratory functions. He says, indeed, that the animal is not killed unless the air is blown in during two expirations at least, and not even then if the animal be very vigorous. In another experiment an open tube is placed in the jugular, and left there for several hours, and the invariable result is that the animal does not experience the slightest inconvenience, although from time to time, especially during inspiration, we hear the characteristic noise produced by air entering the open vessel.

Similar results have also been obtained in a number of cases in which glandered horses were destroyed by blowing air into the jugulars. However injected, whether by special apparatus or by simply blowing through a tube, it was always necessary to introduce a large quantity in order to ensure the destruction of the animal. A few bubbles were not enough, and frequently the introduction, often repeated, of a large quantity, failed to tell, although the disturbance at each injection was all but fatal. In order to ensure death, indeed, it was necessary to prevent the escape of the air blown-in and of the blood by the wound—a phenomenon often noticed; if this be done, death is certain and more or less speedy, in proportion to the amount of air injected and to the vigour of the animal experimented upon.

(D) CONCERNING THE ALIMENTARY SYSTEM.

ART. 59.—On a "*Fauteuil-de-mer*" for the prevention of Sea-sickness.
By M. NEVEU-DEROTRIE.

(*Gaz. Hebd. de Méd. et Chir.*, Aug. 10, 1861.)

The etiology of sea-sickness, generally accepted, has led naturally to the idea of *suspended seats* as a remedy. The hammock which is frequently used is only insensible to one kind of oscillation. Fastened before and behind, it is influenced by the pitching of the vessel; fastened across, by its rolling. But the suspended cribs (*cadras suspendus*) recommended especially by M. Pellasin, may be preserved from all disturbance of the centre of gravity, if they are suspended like a lamp from a single point. This was not remembered by Dr. Neveu-Derotrie, when he communicated to the Section de Médecine de la Société Académique des Département de la Loire-Inférieure ('*Journal de la Section de Médecine*,' &c., vol. xxxvi, liv. 187 and 190) his "discovery of a mechanical means to prevent sea-sickness, and to cure it when it exists." This means consists of an easy chair, of which the principle is borrowed from a child's game representing a man on horseback on a great ball, which, removed from its vertical position, regains it immediately, and recovers its equilibrium. "Suppose," says the author, "this little figure placed on a board, and so confined as to turn easily in all directions, but without being able to slip; its centre of gravity will remain in the same position, whatever may be the inclinations and movements impressed upon the board."

We may limit ourselves to these general hints without giving a particular description of the armchair which has been constructed by M. A. Chevrier, of Noirmontiers. The trial of it was made by the inventor and by M. Guilmeneau, assistant-commissary of marine, at L'Île Dieu, in a passage from L'Île Dieu to La Barre du Mont and back again. The *fauteuil-de-mer* was placed in the cabin, quite at the fore part of the vessel; the sea was very rough. In going, M. Neveu-Derotrie, who occupied the chair, did not feel the least nausea, and M. Guilmeneau was ill at the end of a quarter of an hour, and continued ill throughout all the passage (three and a half hours). In returning, the chair was given to M. Guilmeneau, who remained undisturbed, while his companion was vomiting in a corner of the cabin.

M. Lequerré, who has made a report of this contrivance to the society, believes with good reason that a certain number of similar machines of the height of 1·40 mm., on the deck of a ship or under it, would interfere with the working of the vessel and produce great inconvenience to the sailors. He suggests that they should place on the same vessel but two or three, which should be reserved for delicate persons. We would offer, on our part, a remark applicable to all suspended rods and seats, as well as to the *fauteuil-de-mer*. It is that no contrivance can counteract the rapid movement of rising and sinking in a direction more or less perpendicular, which is experienced so frequently on the sea. M. Neveu-Derotrie seems, it is true, to provide

for this objection, when he says at the beginning of his work, "I do not consider hurtful the vertical movements, about which so much has been made, as long as it is not combined with a movement of inclination." But the feeling of vertigo and nausea, which the descending movement, when it is very decided, causes in many persons even when *lying down*, when the decubitus has destroyed the effect of its oscillations, causes us to fear that this assertion is somewhat venturesome. In this case one would suppose that no mechanical apparatus could ever promise entire preservation from sea-sickness; but at the same time let us recollect that this is no reason why we should not strive against the other conditions which are concerned in the production of this distressing malady.

ART. 60.—*On the use of Creasote in cases of Nervous Vomiting.*
By M. HANOCH.

(*Medical Times and Gazette*, June 8, 1861.)

Professor Hanoch has recently had under treatment three cases of nervous vomiting, two in his clinic and one in private practice, in all of which creasote had a very beneficial effect.

CASE 1.—One of these patients was a boy, æt. 16, who had been in good health, and was suddenly attacked by violent vomiting, together with asthmatic symptoms, after having taken a fatiguing walk. Every kind of food, even water, was vomited, either immediately or about half an hour afterwards, scarcely changed, but mixed with much tough mucus. After a short time the general health became weakened in consequence of the disturbed nutrition. The movements of deglutition appeared to be normal, but the patient said he felt as if there was a valve in his throat; an enormous hypertrophy of both tonsils and catarrh of the pharynx, however, easily accounted for this. Spontaneous pain in the stomach was altogether wanting, although there was a sensation of pressure on the anterior surface of the thorax and in the right side; but there was no change in the bulk of the liver, nor hardness in the neighbourhood of the stomach, which was only slightly sensitive to pressure. Acidity of the stomach, and eructations, and a strong acid taste of the vomited substances, was frequently complained of. The bowels were only opened once in every three or four days. A striking symptom was the acceleration of the respiration (forty in the minute), and the strong contraction of all the muscles of respiration, those on the neck and the chest as well as of the diaphragm; and expiration was very loud and sharp. These phenomena increased if the patient went upstairs or merely walked about, and asthmatic sensations were then also complained of. Percussion and auscultation of the heart and lungs did not give any abnormal signs; the voice was unchanged, and speaking easy. The patient generally slept well, and the respiration was much more tranquil during sleep. The pulse was 112; the temperature of the hands, the cheeks, the nose, and the mucous membrane of the mouth was very low. The patient also stated that he felt alternately chilly and hot, and suffered often from copious perspiration. The urine did not contain albumen, and it was also normal in other respects.

Professor Henoch thought that the case might be one of affection of the vagus, for which supposition the pain in the right side of the larynx seemed also to speak; the pain there increased on deep pressure, and was perhaps

due to the swelling of some cervical glands which were felt there. Still we should scarcely be justified in ascribing the symptoms to a compression of the vagus, as this affection causes different symptoms; even less was intoxication to be thought of, the symptoms of which are quite different, and which would not have lasted so long. The reporter is not aware whether an examination of the spleen was made, but, as there was an alternate feeling of heat and cold, and now and then copious perspiration, the case might have been one of irregular intermittent fever.

A number of remedies which have been vaunted for idiopathic vomiting were used in this case for several months without any benefit whatever; viz., the tincture of iodine, morphia, belladonna, hydrocyanic acid, arsenic, derivantia to the stomach, and hydropathy. The hypertrophied tonsils were then excised, but the operation had no influence upon the disease. After some time, however, the temperature and the pulse became again normal, while the anomalous symptoms of respiration continued, and medicines, food, and drink, were vomited; the same was the case with cod-liver oil and Tokay, which were given to improve the nutrition. Part of the nourishment administered was, however, certainly assimilated, as the nutrition was not so much impaired as might have been expected. After the patient had been under the care of Professor Henoch for about five months, creasote was ordered—(gutt. x in aq. dest. ℥iv; with syr. simp. ℥j to take a tablespoonful four times a day). After the boy had taken this mixture he only vomited once more, and then bile, which he had never brought up before. The appetite and the action of the bowels soon became normal, the nausea disappeared, and all food, even of the heaviest description, was digested. The same treatment was continued for about a month, when his health was almost entirely re-established; some Tinctura Ferri Chlor. was then administered (gutt. xij) which completed the recovery.

CASE 2.—The second case was that of a boy, æt. 11, who, when he came under Professor Henoch's care, had suffered from obstinate vomiting for three weeks. The appetite was normal, the bowels open, the tongue slightly coated. The abdomen was somewhat meteoristic; no pain was complained of, but itching at the anus was often troublesome; the patient was also much emaciated and had lost strength. He was ordered to take of gutt. viij of creasote in ℥iv of water, a teaspoonful four times a day. The vomiting ceased after the boy had taken the first spoonful, and never returned.

CASE 3.—The third case was that of a man, æt. 39, who had been syphilitic, and still showed some traces of secondary syphilis, viz., swollen glands on the neck and behind the ears, alopecia and epithelial coating of the tonsils. Disposition to tuberculosis existed in him, as was evidenced not only by occasional hæmoptysis, cough, fever in the evening, nightly sweating, but also by the physical examination of the chest. When he came under the care of Professor Henoch he had already suffered for three weeks from continual vomiting. If he walked about he was able to keep the food on the stomach for about half an hour, but when he remained quiet vomiting ensued a quarter of an hour after eating; it was sometimes preceded by cough, at other times not. There was no pain in the stomach. After he had taken ten drops of creasote in ℥iv of water, the vomiting disappeared and did not return.

In all the cases just mentioned the effect of the creasote was so rapid and decided, that the beneficial result was evidently not only *post hoc, sed propter hoc*. An excessive irritability of the stomach, which did not allow food or even medicines to remain on the stomach, was, of course, the proximate cause of the vomiting; but it would be

difficult to assign a cause of this augmented irritability. In the last case it was, perhaps, due to a catarrh, which so often accompanies tuberculosis. In certain morbid conditions, which we generally comprehend under the name of dyspepsia, especially in deficient secretion of the gastric juice, in excessive secretion of mucus, in dilatation of the stomach owing to stenosis of the pylorus, the contents of the stomach undergo certain changes analogous to fermentation, and we find in them cryptogames, yeast, sarcine, and *penicillium glaucum*. Creasote is shown by experience to be one of the most powerful remedies against fermentation and putrefaction; and its use in the diarrhœa of infants, chiefly that form which is observed in summer, is probably due to its limiting the fermentation of the contents of the intestines. The beneficial effect of creasote in cases of this description has, amongst others, been demonstrated by Dr. Turnbull, of Liverpool, in his excellent treatise on disorders of the stomach with fermentation. Whether the vomiting proceeded from such a cause in the instances mentioned above, cannot be decided with certainty, as the vomited substances were not subjected to a microscopical examination. At all events, they seem to justify us in giving creasote in dyspepsia accompanied with vomiting more largely than has hitherto been done.

ART. 61.—*A new mode of treating Cholera.*

By Dr. GASON, of Rome.

(*Medical Circular*, Dec. 26, 1861.)

The following remarks are from a paper on the cholera which raged in Tuscany in 1855.—“As soon as the serous evacuations commenced,” says Dr. Gason, “I plugged the anus so as to prevent the further discharge of serum; at the same time I tightly swathed the bowels in flannel, and strictly enjoined that the patient should be kept in the horizontal posture. Some may object to the plugging of the anus, and in these cases I recommend a towel to be tightly rolled up and placed beneath the buttocks, so as to compress the anus, the patient being warned at the same time of the absolute necessity of restraining every desire to go to stool, even though under the most urgent calls of nature. I found this treatment very efficacious in three or four cases. All liquids were strictly withheld, and gentle friction applied to the extremities; if vomiting or faintness continued, chloroform, in small and frequently repeated doses, given on a lump of sugar proved of great service. Opiates appeared more injurious than beneficial, and seemed to aggravate the stage of reaction. My object in writing is to lay down a form of treatment which will be found, I believe, very efficacious in shortening and moderating the stage of collapse. The *rationale* of the treatment is very simple. We have a disease in which the system is being deprived of a large quantity of one of the vital principles of the blood; the object is to stop this, and what can be more natural than the means proposed? The bandage over the abdomen compresses the vessels, and by its pressure assists in preventing the discharge, at the same time that means are employed to cause reaction

and produce absorption of what has been secreted. One observation on the time of its employment. It should not be used during the stage of diarrhoea, when the bowels are discharging feculent matter unless the symptoms are urgent. Nor is there much use in trying it when the system is almost drained of its serum; it should be employed during the time that the serum is being discharged, and at as early a period as possible."

Dr. Gason says that his opportunities of testing this *new* mode of treatment have been limited, permission to practise in Lucca having been refused; but "in the cases which I did attend I had recourse to plugging of the anus, and in every case recovery took place." What was the number of these cases, and what were their characters, he does not say.

ART. 62.—*On the use of Areca Nuts in the treatment of Tapeworm.*
By Dr. JOHN BARCLAY, of Leicester.

— (*British Med. Journal*, Aug. 24, 1861.)

"About two years ago," writes Dr. Barclay, "I purchased a dog of a London dealer, and found him infested with tapeworm, which produced partial paraplegia. I tried to remove it by male fern; but large doses produced no effect. I could not get him to take kousso properly; I was afraid of killing him with turpentine; and I therefore wrote to the dealer complaining. He replied that the remedy was most simple—to get two areca nuts, have them ground and pounded, and administer the whole as a bolus or in milk. The dog took it in milk, and in a few hours discharged an immense worm in long strings all over the yard.

"The areca nut is the kernel of the fruit of the species of palm called *areca catechu*. It is commonly called the betel nut, being used, along with the leaves of the betel pepper, for chewing in eastern countries. I got a druggist to procure a supply of them, and also some for the infirmary; and I have used it with great success for the *tænia* of man, as will be seen.

"It requires to be ground and then pounded. The dose I give is usually four, five, or six drachms, which is easily taken stirred up in milk. The worm is usually discharged four or five hours afterwards, alive. The taste of it is simply highly astringent.

"But with all remedies, I have found the necessity for a smart purgative the day previous to their administration, and for a fast the evening before the vermifuge is taken.

"Of course, the process of complete cooking entirely destroys the vitality of the *cysticercus*; and it is my object in now briefly relating the cases that have occurred to myself, to show the probably direct mode of transmission of the *scolex* to the human body, and which has been acknowledged to exist in all but one of the cases I shall recount.

"In some instances, the eating of raw meat has been at once acknowledged; in others, the fact has only been elicited on close cross-

questioning. I have in almost every case quoted from my notes the exact words used by the patient."

CASE 1.—E. F—, female, not married, æt. 53; boot-binder. August 11th, 1858. She had a fit lately, and was passing joints of tapeworm. "Has often eaten raw salt meat; very fond of it." She was ordered kousso.

14th.—Only a few joints came away. The kousso was repeated.

18th.—Many "bunches" of worms were discharged. She was ordered to repeat the kousso in a week.

28th.—Joints were still passing. A drachm of oil of male fern was given.

September 8th.—A good many joints came. The oil of male fern was repeated.

25th.—She has seen no more worms.

April 27th, 1859.—She attended again, and the areca nut brought away a large live worm, which was broken at the anus.

CASE 2.—V. W—, female, æt. 18; country servant. April 9th, 1859. She was now passing joints of tænia. She had been treated *homæopathically* with ordinary doses of kousso! "Has eaten raw suet." She was ordered five drachms of areca nut.

16th.—Only three quarters of a yard had come away. The areca was repeated.

23rd.—She passed five yards of worm. The areca was repeated.

June 4th.—No more joints had been seen.

CASE 3.—B. C—, male, æt. 30; hosier. May 20th, 1859. He had been passing tænia two years. He had eaten raw meat; "thinks it good quite raw." The areca nut was ordered.

27th.—An immense quantity of worms came with the first dose, alive. The areca was repeated.

June 3rd.—No more worms appeared. Kousso was ordered.

10th and 24th.—No more worm came away.

CASE 4.—D. E—, male, æt. 25; hawker; drunkard. June 18th, 1859. He had had tapeworm three years; had eaten raw meat, "downright raw beef." Areca was ordered.

29th.—The worm began to crawl away from him in a quarter of an hour; it was broken; and the second dose brought away the remainder, with the head as fine as a small pin. The areca was repeated.

July 2nd to September 3rd.—No more worms appeared.

CASE 5.—F. G—, male, æt. 29; sawyer. August 12th, 1859. He had had tænia two years; he saw joints to-day. (His child had them also.) "Likes his meat half-done;" "has eaten it quite raw—is nice." Areca was ordered.

19th.—He passed very few joints. The areca was repeated.

CASE 6.—H. J—, female, married, æt. 40. September 16th, 1859. She had tænia; saw some on the previous day. She brought away twenty-four yards of worm at twice, after taking tin-filings, three weeks ago. She ate all her meat very underdone. "Has eaten raw bacon." Areca was ordered.

23rd.—No effect. Oil of male fern was ordered.

30th.—She passed a few joints. Turpentine was ordered.

October 7th and 21st.—No more worms were seen.

CASE 7.—M. N—, female, æt. 60. Travels with pottery. October 15th, 1859. She had tapeworm; saw joints to-day. She had eaten raw meat "a many a time"—"particularly fond of raw meat." Areca was ordered. She did not attend again.

CASE 8.—O. P—, female, æt. 44; widow. March 3rd, 1860. She had phthisis.

March 1st.—She complained also of tapeworm; saw the first joints a week since. "Has been eating raw beef, as she was told it was strengthening." Arcea was ordered.

April 4th.—The first dose brought away a large worm, with the head like a pin, very plain.

18th.—No more joints were seen.

CASE 9.—U. V—, female, æt. 42; married. April 27th, 1860. She came to the infirmary with obstinate diarrhœa.

June 1st.—She first mentioned that she had tapeworm. She ate raw meat, beef or mutton; "not pork, it is not nice." Arcea was ordered.

8th.—Three yards of worm came away with the first dose.

29th.—No more worms were seen. The diarrhœa was checked.

CASE 10.—W. X—, male, æt. 25; engine-fitter from Liverpool. June 23rd, 1860. He had tapeworm two years ago; had seen none since. Before that, he had been at work where he had no means of cooking, and lived on raw bacon and bread. Arcea was ordered, but no worms came; indeed, his symptoms did not indicate their presence.

CASE 11.—D. C—, female, æt. 15. August 29th, 1860. She had fits and tapeworm; she passed a quantity a fortnight ago, from a dose of kousso. The mother had seen her eating raw bacon. Arcea was ordered.

September 5th.—No more joints were passed.

CASE 12.—F. E—, male, æt. 24; country. October 20th, 1860. He had had tapeworm for eight or nine months. He had eaten raw bacon; "very often eats it"—"very fond of it;" "has ate a great deal of it." Six drachms of arcea nut were ordered.

27th.—The first dose brought away an immense amount of worm, with two head-pieces at least, as fine as a thick thread.

November 11th.—No more worms were seen.

CASE 13.—H. G—, male, æt. 45; labourer; country. February 15th, 1861. He had had tœnia two years. He had eaten raw bacon. Arcea was ordered.

February 22nd.—Only a few joints came. Kousso was ordered.

March 1st.—The second dose of kousso brought some worm away.

CASE 14.—H. J—, female, æt. 40; servant. March 15th, 1861. He had had tœnia for years. Some were passed five days ago. "Has often eaten a bit of raw meat—fond of it." Three doses of arcea were ordered.

22nd.—Some worms came with the first dose; some with the second; none with the third. A most complete worm was passed.

April 12th and 19th.—No more worm was seen.

CASE 15.—O. N—, male, æt. 23; sweep; country. June 12th, 1861. He had had tapeworm for six months. He had eaten raw meat—"not so much of it."

June 19th.—A quantity came away with the first dose. The head was discharged.

The cases which we have given, and others not quoted, thirty-two in all, seventeen males, and fifteen females, bring out very clearly the fact that the eating of raw meat is a cause of tapeworm, for, "with one single exception, they all acknowledged to eating raw meat—absolutely uncooked."

ART. 63.—*New treatment of Acute Hepatitis.* By Mr. H. C. CUTLIFFE, Civil Assistant-Surgeon of Meerut.

(*Indian Lancet*, Feb. 15, 1861.)

This treatment, Mr. Cutliffe informs us, has been carried out with great success in the hospital of the second E. I. Cavalry Regiment, at Meerut, and not only by the author himself, but also by other medical officers, whose names are given. It consists in the administration of certain powders (which are kept ready for immediate use), composed of tartarized antimony and nitrate of potass—two grains of the former medicine, and 2 drachms (?) of the latter, being divided into eight powders. One of these powders is given every half hour till the local pain in the hepatic region has almost or entirely subsided, which is usually the case in about eight hours. The relief is most marked, but not in so short a period complete; the powders should be continued every one, two, or three hours, according to the severity of the remaining symptoms. In some cases, after the powders have been regularly given every half hour, for twelve or fourteen hours, considerable tenderness on pressure in the hepatic region remains, though the acute pain during inspiration or other movements has greatly decreased, and decubitus changed with ease, for these a few leeches over the tender spot prove of great advantage, and should be repeated according to the persistence and severity of the local tenderness, the powders being continued at intervals, gradually extended as the tenderness subsides. Fomentations, hot and narcotic, often assist to soothe the patient in the early stages, before the powders have had time to act, and probably hyoscyamus and conium internally at this period would be of much service. The patient is restricted to spoon diet during the acute stage, and fed but sparingly during early convalescence.

“The principle of treatment is therefore the frequent repetition of antimony with nitre, and on the regularity and frequency of the doses depends success, and in this is the peculiarity. I have tried increasing and decreasing the dose, of antimony, as also extending the interval of its exhibition in smaller doses, or at more lengthened intervals, I have found it less certainly efficacious. I have seen no reason to increase its dose or frequency beyond the quarter grain every half hour, and it is given in this manner that I recommend it especially. Antimony, as we all know, has earned a creditable reputation for the cure of inflammatory disease in days past and present, but I am not aware that it has been tried for acute hepatitis in the manner I adopt.

“The cases for which this treatment is to be relied on as a curative means, are those of acute uncomplicated hepatitis of recent date, and its benefits are best witnessed in those cases in which pain and tenderness in the hepatic region are especially severe, and appear to depend on acute inflammation, arising from whatever cause, in some part or parts of the liver and its capsule, and which, if not speedily checked, will lead to the formation of abscess. Such cases are seen in the recruit on joining his regiment, when in the riding school bumping

his viscera, readily stimulated and oppressed by voracious appetite, bazaar liquor, and canteen rum, in the native soldiers, as also in the pensioner of more advanced years, and dram-drinking habits, but in all, different as is necessarily the pathological condition of the organ at the time of the onset of inflammation, and various as are the causes inducing it, so far as my experience has yet permitted me to judge, this treatment is to be relied on for the cure of recent and uncomplicated hepatitis.

"I may appear to be slurring over the important distinctions which have been laid down, and may be observed more or less of the various forms of hepatitis, but I have given as many points as have guided many in selection of appropriate cases for this treatment; and since my paper is simply on treatment, I trust I may be excused entering into the details of hepatitis, and so lengthening it as to make it rather to be avoided than read.

"The important features of the treatment are :

"1st. Its simplicity, and, if diagnosis is correct, its certainty.

"2ndly. Its speedy relief to acute pain ; in eight or twelve hours the patient breathes comparatively freely, lies easily, evinces on his countenance relief from suffering, and declares the same in firm voice, and often tranquil sleep comes on. The morbid action in the liver abates rapidly, its area of dulness, if before increased, becomes less, and convalescence soon takes place.

"3rdly. A peculiar tolerance of antimony is clearly observable in this disease, the powders seldom produce vomiting in the acute stage, act but gently on the bowels, and leave no prostration referable to the drug behind, and hence the patient has—

"4thly. Early convalescence with the least possible loss of strength ; he is comparatively soon out of hospital, provided he will come to hospital as soon as his disease commences, consequently—

"5thly. He is but little liable to return to hospital again from relapse of former symptoms, or attacks of fever, other maladies to which the enfeebled men discharged from hospital are prone to.

"6thly. But the acute cases must be recent ; if advanced, antimony will, I believe, answer so far as can be reasonably expected, but neither antimony nor any other medicine, I believe, can restore to their natural condition tissues far degenerated or disorganized by long-persisting inflammation, the line of demarcation is beyond me to lay down ; but the practical point in connexion with the subject is to induce men to present themselves for examination, more particularly hard-eating recruits when they first feel ill."

ART. 64.—*Rare case of diseased Liver.*

By Dr. MARTYN, Physician to the Bristol General Hospital.

(*British Med. Journal*, Feb. 2, 1861.)

CASE.—J. P., æt. 38, was admitted into the Bristol General Hospital, November 7th, 1859, suffering from ascitic distension of the abdomen, for which he had been tapped. His habits had been very irregular. Tapping

was again performed on the 17th of November, and a third time on the 5th of January, 1860. On the day after the last operation he died.

Post-mortem examination.—The organs were generally healthy, except the liver and peritoneum; the latter showing traces of inflammation of slight and recent character. The liver was somewhat large, its surface being marked by a few depressed lines, and covered with recent lymph. On section, its lobules appeared either healthy and their cells not overloaded with fatty granules, or else obscured by purple congestion. The gall-bladder was empty. At the centre of the liver there was the following state of things near the transverse fissure, which was occupied around its vessels, &c., by a hard fibrous mass. On section here the knife encountered scirrhus portions, evidently composed of liver tissue altered by a new and fibrous ingredient. Hence the pale-red substance was close in texture, very elastic, and hard; while vessels passing through it were obliterated in the transit, and pervious further on. In the centre of the hardest parts the knife passed through white or very faintly yellowish masses of softer matter, the sections of which, to the number of three or four, varied up to an inch and a half in diameter. These whitish masses were surrounded by delicate zones of redness, and situated in these incomplete cysts. Irregular in shape, they might be turned out of their hollows by tearing some adhesions; when it appeared that they were in the tracks of portal canals, though, having burst them up, they excavated the liver tissue itself. Through one of these white masses an occluded portal vein ran; but some large portal trunks remained patent. The interiors of the emptied hollows were mottled with yellow matter. A probe would not pass up the cystic duct from the empty gall-bladder. The material of the yellowish-white masses was quite homogeneous, very elastic, and tore like white of egg boiled very hard. A microscopic section, from wherever taken, showed the following elements: 1. A granular base not influenced by ether. 2. Refracting granules soluble in ether. 3. Wrinkled spheroidal cells, averaging $\frac{1}{3000}$ of an inch in diameter, and possessing, when acted on by acetic acid, very much the character of pus cells. 4. Small plates of cholesterine. 5. Minute granular masses of orange-coloured biliary matter. 6. Masses of radiating acicular crystals. 7. Some columnar epithelium. Alcohol, in which a piece had been boiled, soon deposited cholesterine, and, when evaporated to dryness, concentric scales resembling leucine. Nitric acid applied to a slice indicated protein and bile compounds, producing also some effervescence. The star-shaped bodies were composed of tyrosin, as far as I could determine, the quantity present sufficing for microscopic analysis only. Insoluble in ether, and almost so in alcohol, they were readily taken up by mineral acids, and destroyed by heat. On boiling pieces of the white substance in water, filtering and concentrating, there were deposited beautiful stars of crystalline needles, possessing most of the characters of tyrosin. The pale-red condensed liver tissue around the white masses proved a fine example of abnormal development of connective tissues. It was crowded with large oval nuclei; and, at the torn edge of the preparation, each was seen to belong to a fusiform fibre-cell with dividing extremities.

The cause of death in this person was evidently an obstruction to the portal circulation, occasioned by the diseased tissue in and around the transverse fissure of the liver. The morbid appearances were due doubtless to a previous state of inflammation; for the thickened areolar tissue in the transverse fissure, the condensed tissue of the liver itself in the neighbourhood, and the hard cicatrix-like metamorphosis of parts near the white masses, all point to the inflammatory condition. The white, imperfectly encysted

masses must have arisen out of this process; for the cells in them could have come only from the epithelium lining the biliary ducts, and thrown off, after the manner of pus-cells, from any irritated mucous surface. The white masses are pervaded by elements of bile, which must therefore have been freely mixed with the cells in the dilating ducts while the whole was semifluid. That certain ducts should have been dilated in this way is to be attributed to their occlusion by fibrous constricting tissue. Other ducts, remaining unaffected, conveyed the bile from the rest of the liver, so that its function, *quoad* the bile, was not appreciably impaired.

The pathological sequence would probably be as follows: 1. Irritating matter, present in the portal trunks. 2. Irritation set up in their neighbourhood, ending in rapid cell-growth of the connective tissue, and its condensation. 3. Irritation of the ducts involved, and cell-growth in them, with admixture of bile (that mere occlusion of the ducts will not produce this effect is proved by cases recorded by Bright and Frerichs). 4. Solidification of this semifluid mass, now cut off below by a fibrous structure. 5. Gradual constriction of portal canals and veins by cicatrix-like contraction, occasioning venous congestion, dropsy, deprivation of nutritive matter, and death.

Deposits of this kind have been described as cancerous or tubercular; they have been called "tubera," "retrograde cancer," "encysted knotty tumours," and obsolete abscesses. Dittrich first traced the connexion between them and the syphilitic poison, which may perhaps be directed toward the liver in consequence of the habit of spirit drinking.

ART. 65.—*Case of Traumatic Emphysema of the Liver.*

By M. CHABERT.

(*L'Union Médicale*, No. 84, 1861.)

CASE.—A drunken artilleryman threw himself from a window and died three days afterwards from the numerous injuries received, a marked jaundiced condition of the skin previously manifesting itself. At the autopsy a multitude of small, irregularly-shaped elevations of a brownish-yellow colour covered the external surface of the liver. When punctured a noise like that from the bursting of a small bladder filled with air was heard. There were three lacerations of the organ two or three millimetres only in depth. Incisions into various parts of the liver gave issue to no fluid, their surfaces being dry and of a brownish-yellow colour, and presenting numerous vacuoli like a sponge. On pressing portions of the organ between the fingers crepitation was distinctly heard. The diminution of specific gravity was remarkable, portions of any part of the liver floating in water, and when compressed under this yielding numerous bullæ, which burst on the surface, the liver then sinking to the bottom. The surface of the gall-bladder (distended with deep-coloured bile) was covered by a great number of vesicles resembling those of the surface of the liver. No cadaveric change accounted for these appearances, as the autopsy was performed soon after death. The diaphragm and the intestines being completely uninjured, it cannot be admitted that the air contained in the liver could have proceeded from either the lungs or the intestines. M. Cruveilhier's failure in his experiments to inject the biliary passages from the duodenum forbids the supposition that the air gained access to the hepatic parenchyma by a reflex passage through the choledochus. We are thus driven to the supposition that the gas must have been formed within the liver itself, probably within the cellular tissue

connecting Glisson's capsule with the glandular tissue. In the 'Union Médicale,' September 8, 1855, cases are related in which emphysema of the liver was connected with internal disease; but there is no other example of its dependence upon a traumatic lesion.

ART. 66.—*The difference between the Lobules of Healthy and Cirrhotic Liver.* By Dr. BEALE, Physician to King's College Hospital, &c.

(*Archives of Medicine*, April, 1861.)

"The section of the human liver," says Dr. Beale, in his recent lectures at the Royal College of Physicians, "magnified 215 diameters, shows the capillaries injected blue, and the cell-containing network alternating with them in all parts of the lobule. Both the capillaries and the tubes containing the cells have distinct walls. Another section of healthy liver, under a power of forty diameters, shows the following points: In this specimen the portal vein was injected with carmine, and the hepatic vein with Prussian blue. The capillaries of the lobule are filled with the colouring matter, those in the centre of each lobule being *blue*, while those at the circumference are *red*. Observe how *very narrow the interlobular fissures are*, and how in many places the capillaries of one lobule are continuous with those of adjacent lobules. The interlobular spaces are clearly destitute of any areolar or fibrous tissue. They are occupied by the branches of the portal vein which you see, and branches of the artery and duct, and lymphatics, which have not been injected in this specimen.

"Let this preparation be compared with the cirrhotic liver in which the vessels have been also injected. What a wide space exists between the contiguous lobules, of which but very little, and only of the *central part of the lobule*, remains in many cases. Vessels and tubes, which may be seen more distinctly by using higher powers, are observed in the substance of the tissue usually stated to be *fibrous*.

"In another specimen of a cirrhotic liver, magnified 130, which has been soaked in carmine, the shrivelled cells within the narrowed tubes, and the network, can be seen so distinctly that you will hardly fail to wonder how it has happened that the nature of this so-called fibrous tissue had not been made out long since; but many of the most delicate and beautiful textures appear fibrous enough when placed in water and roughly examined; and thus it has been supposed that morbid changes have originated in a comparatively passive structure, the areolar or connective tissue.

"A section from the same liver has been put up in water, and not a vestige of anything but 'fibrous tissue' is to be seen where it has been shown that numerous tubes and cells and vessels can actually be demonstrated. By immersing a delicate preparation in water, the appearance of the presence of a large quantity of fibrous or connective tissue can often be produced.

"Cirrhosis is not the result of inflammation of Glisson's capsule, which structure does not exist around the lobules of the human liver, but it arises from a degeneration in the secreting cells, and wasting of the entire lobule may result. This wasting always begins at the

circumference of the lobule, and spreads towards the centre; the lobules become absolutely smaller; the interlobular spaces appear to become wider, but the greater width depends merely upon the *lobular structure* having become so altered as to resemble the appearance produced by the tissues usually occupying the space or interlobular fissure. The lobules gradually shrink, many cease entirely to secrete bile, the little bile formed is often acid, the quantity of blood distributed to the lobule becomes less and less, the whole liver shrinks and becomes condensed, and gradually ceases to perform its functions."

ART. 67.—*Case of Ascites and Anasarca cured by nature.*

By Dr. GASON, of Rome.

(Medical Circular, Oct. 10, 1860.)

Dr. Gason reports the following very interesting case as a companion to one which came under our notice some time ago. (Abstract, XXX, p. 112.)

CASE.—Mrs. Mary Ann Farr, æt. 28 years, of the parish of Powerscourt, County Wicklow, of a nervo-sanguineous temperament, wife of a carpenter, had for a considerable time cough, attended with occasional spitting of blood, expectoration, night perspirations, difficulty of breathing in walking up hills, and in fact, the usual class of symptoms and physical signs of pulmonary phthisis, with, however, this rare exception—a large appetite. In addition to the disease of the chest, she had swelling of the extremities and dropsy of the abdomen. She complained, also, of pain on pressure over the region of the liver. As her disease was advancing rapidly, and her strength diminishing, notwithstanding that she took a large quantity of food (consuming daily from one to three pounds of meat, in addition to other food), and as her husband and parents were poor, I proposed that she should go to Dr. Stevens's Hospital, in Dublin, where she was put under the care of Dr. John Crampton.

There were points of great interest in her case, and she was visited several times by Sir H. Marsh, who was at that time one of the physicians to the hospital, and who coincided in opinion with Dr. Crampton, that she was labouring under tubercular phthisis with hydrothorax. Dr. Crampton thought she had also disease of the liver, which he believed was the cause of the dropsy, and which had then decidedly declared itself. She appeared to be rapidly declining in strength; her cough was more frequent, her expectoration more copious, the night perspirations more abundant, complete suppression of the menstrual evacuations, and she was daily losing flesh. Her breathing was becoming more oppressed and hurried, the swelling of the abdomen and legs increasing very much; and in fact no hope was held out to her parents and husband that she could survive beyond a few weeks at furthest; and as she expressed a desire to return home, they were permitted to remove her to the country, which they did with much difficulty. A female quack doctor was then sent for, who gave her a decoction of some herbs to drink, and a stimulating liniment to rub three times a day into the legs, the skin of which was now very much distended and stretched almost to bursting. On being sent for to see her, and finding all her symptoms much aggravated, I punctured her legs in various parts with a fine needle, which gave vent to a considerable quantity of water, and this continued to ooze for several days. The friction of the legs was continued at the same time without my knowledge, which being done carelessly, a portion of the

liniment got into the holes made in the legs by the needle. This caused them to inflame, and a portion of the skin, equal in size to the palm of the hand, sloughed away from the calf of the right leg, and rather a smaller portion from that of the left. This allowed a great quantity of water to flow from the legs, amounting, I was told, to at least one quart in the day, which was collected by the feet being placed in a vessel. At this time she was unable to lie down, and either sat upright in bed, or was moved to a chair near the fire.

The breathing was much relieved by this drain from the legs, but the abdominal dropsy rapidly increased, and the umbilicus became very much protruded and distended, giving the appearance of a ring uterine pessary, depressed in the centre, with the circumference very much distended and shining. In about a fortnight after the separation of the sloughs from the legs, I was sent for at an early hour in the morning, to go immediately and see this patient, the messenger stating to me that she had burst about five o'clock a.m. On reaching the house, I found the account to be quite true; that the umbilicus had given way, and the whole bed was completely saturated by the fluid which had escaped; and that, in addition, an ordinary sized stable-bucket had been filled with what had been collected, and the floor beneath the bed was quite wet. The stable-bucket, which had been quite empty, contained at least five gallons and a half of the discharge which had poured through the umbilicus; so that, calculating what was collected, and making due allowance for what escaped, there could not have been less than thirty pints discharged.

She was very faint; but having bandaged her tightly round the abdomen and administered a stimulant, she rallied, and expressed herself as much relieved. From this time a considerable amendment took place in her state of health, the cough subsiding as well as the expectoration diminishing. The night perspirations ceased, and, with the exception of another collection forming in the peritoneum, she appeared to be getting well. In three months after this the abdomen was very tense and distended, but not to the same extent as on the former occasion. The umbilicus again gave way, and about half the quantity of water as on the former time escaped from the peritoneum. After this she mended rapidly; the kidneys took on increased action; the legs, which were still unhealed, began to close, and all her chest symptoms disappeared.

In ten years after this, Mrs. F— was quite well, strong, and able to go through any amount of physical exertion. She lost all cough and expectoration, regained health and strength, and appeared, in every respect, perfectly healthy.

(E.) CONCERNING THE GENITO-URINARY SYSTEM.

ART. 68.—*Clinical remarks on Uræmia.* By Dr. JAKSCH.

(*Vierteljahrsh. f. die Prat. Heilk.*, vol. ii. 1860.)

The observations of Dr. Jaksch upon the uræmia which is consecutive upon Bright's disease possess little if any novelty, except in so far as they bear upon the accidents resulting from the stagnation and absorption of decomposed urine. M. Jaksch uses the word *ammonæmia* to represent that change in the blood which is produced by this absorption, seeing that carbonate of ammonia, arising from the urea, is

the best understood ingredient in decomposing urine. He has met with urinæmia—(1) as a consequence of torpor and paralysis of the bladder, (2) in cases of impermeable ureters, and (3) as a result of different attacks on the kidneys (suppuration, tubercles, dropsy).

The signs of ammoniæmia, and the signs of urinæmia, present, according to Dr. Jakseh, very marked differences.

In ammoniæmia the urine has, when voided or drawn off, a strong ammoniacal odour—a proof positive of its previous decomposition within the body. In urinæmia, consequent upon Bright's disease, the case is quite different.

Ammoniæmia is never attended by dropsical symptoms.

In marked cases, ammoniæmia is almost invariably accompanied by a remarkable dryness and smoothness of the mucous membrane of the fauces. This dryness is remarkably obstinate, and so complete that the parts seem to have altogether lost all their natural moisture. In some cases, also, it extends to the mucous membrane of the nostrils, eyes, and larynx, the extension to the latter region being the cause of the hoarseness and voicelessness which are met with in a certain number of very bad cases. In urinæmia these symptoms are never met with.

In a chronic and advanced case of ammoniæmia there is an unmistakable ammoniacal odour about the patient, especially about his breath; not so in urinæmia. In illustration of the latter point, M. Jakseh relates the case of a patient dying of chronic albuminuria, and remaining several days before death without secreting a single drop of urine, who was comatose during the last three days of life, and about whom there was not the slightest trace of ammoniacal odour to the very last.

In ammoniæmia there is an objection to animal food; in urinæmia the contrary.

M. Jakseh has never observed in urinæmia the violent intermittent rigors which are sometimes met with in ammoniæmia, and which may have no distant resemblance to attacks of intermittent fever; and on the other hand, he has never seen in ammoniæmia either convulsive affections of the nervous system, or croupal or diphtheritic exudations on the buccal, pharyngeal, or respiratory mucous membrane, on the serous membrane, or on the skin, neither has he seen in ammoniæmia any of those affections of vision which not unfrequently occur in advanced stages of Bright's disease.

In chronic ammoniæmia the skin is of an earthy hue, and the body generally is emaciated, not dropsical. In acute cases, the expression of the features is remarkably changed, the degree of muscular feebleness is almost paralytic, and vomiting and diarrhœa are scarcely ever absent. In all fatal cases death was ushered in by a stage of coma of longer or shorter duration.

The course of ammoniæmia may be that of an acute disease terminating favorably in a few days under suitable treatment, or issuing in death from two to six days. In these cases, the access of the disorder is marked by violent and reiterated vomiting. Then come feverish symptoms of a typhoid character, prostration, coma. The course of the disease may also be chronic, extending over many weeks, months, or even years, and, after many fluctuations, terminating not always unfavorably even in the most confirmed cases.

ART. 69.—On the prognostic value of Amaurosis in Albuminuria.

By M. ROCHE.

(Bull. de la Soc. de Méd., No. 9, 1860; and Gaz. Hébd. de Méd., Nov. 30, 1860.)

The prognostic value of amaurosis in albuminuria has not yet been made the subject of special inquiry. M. Guéssin, in saying that persons suffering from albuminuria and amaurosis, and having at the same time pains in the head, are in a very dangerous case, attaches especial importance to the head symptoms. M. Lécorché, indeed, appears to have been the first to say anything definite with respect to the affection of vision in the case in question. According to this observer (1) there is no constant relation between the gravity of the kidney-affection and the amblyopia, and (2) the existence of amblyopia in connexion with albuminous nephritis does not necessarily make the prognosis of this latter affection more gloomy.

After an examination of fifteen cases, M. Roche has arrived at an opposite conclusion to that of M. Lécorché.

The *resumé* of these cases gives six cases of acute albuminuria, five of them idiopathic, ending successfully without either amaurosis or convulsion; one case of chronic albuminuria also ending favorably, without amaurosis or convulsion; one case of acute albuminuria, followed by death, without convulsion or amaurosis; two cases of acute albuminuria, followed by death, with amaurosis and convulsion; three cases of chronic albuminuria ending fatally, with amaurosis and convulsion; two cases of chronic albuminuria, also ending fatally, with amaurosis and without convulsion. In the whole, seven cures, and eight deaths, in fifteen cases.

We find, therefore—

On the one hand, seven cures without amaurosis.

On the other hand, seven fatal cases, in all of which amaurosis was present; and between these two series, a single case ending fatally without amaurosis.

It would seem, therefore, that amaurosis is a more constant accompaniment of fatal albuminuria than convulsion, seeing that in the eight fatal cases convulsion was present in five of the number, and amaurosis in all. It would seem, also, that amaurosis is a sign of the very gravest import in the cases in question.

ART. 70.—On Albuminuria and its Ferro-albuminous treatment. By Dr. D. NELSON, formerly Physician to the Queen's Hospital, Birmingham.

(British Med. Journal, Sept. 1 and 8, 1860.)

"In the cases about to be cited," says Dr. Nelson, "other remedies were certainly employed besides the substitutive appliances of albumen and steel, such as digestives, powerful tonics and diuretics, &c., as required; but I viewed the latter as only auxiliaries, however useful; and the former as the essential necessities for recovery; that is to say, that the ferro-albuminous supplies held out a rational hope of restoration, even without such aid; while all the forces of quinine or

pepsine, or what not, could hold out no chance of amendment, without the due administration of the iron and albumen as direct representatives or analogues of the losses that were being sustained by the system from day to day and from hour to hour, through periods of years, or of months at least."

Dr. Nelson relates five cases, one recovering, the others terminating in death, but apparently deriving some benefit from the treatment. What this treatment is, is perhaps most clearly seen in the first case, which is as follows.

CASE.—Mrs. C. M—, married, æt. 32, first consulted me on October 24th, 1853. She stated that she had formerly possessed a good colour, and been quite robust; but, for a considerable time past, had lost that colour, and become excessively weak, which she attributed to frequent and profuse uterine hæmorrhages, which came on at uncertain periods, and rendered her quite prostrate. No cold applications nor other means had ever arrested them. Now she was blanched in countenance, and swelled under the eyes and over the face generally. She had severe dragging pain in the back; and her thighs, legs, and feet, were enormously distended with fluid. She was also troubled with constipation and continual sickness, vomiting several times in the day. She first took aperient pills, and a calmative stomachic mixture of calumba, cardamoms, and hydrocyanic acid, which had the desired effect; and when the urine was tested, it was found to be almost entirely albuminous. As the dropsical swellings were so oppressive, the first attempt made, after settling the stomach, was to draw off the fluid; and she took a drastic purgative every second or third day, with diuretics in the intervals. These she continued till the 14th of November, when the anasarca was very much reduced; and she was put under a course of steel and albumen, taking full doses of the tincture of iron in the peptic liquor, and four eggs a day. From these remedies she seemed to derive much benefit, as her colour improved, her appetite became good, and the anasarca almost entirely disappeared. One relapse she had, from some congestion of the lungs supervening, along with an increase of pain in the back, and tumefaction of the feet and eyes; but a belladonna plaister to the back and a blister over the chest subdued that attack; and, by the end of December, she looked and felt comparatively so well, while the albumen had also diminished to about a fourth of the urine passed, that she stopped visiting me, under the belief that the complaint had "made a good turn," and she might now be better without constantly taking medicine. So she went on until the 30th of March, 1854, when, after some preliminary swellings and loss of colour, she was seized with a profuse flooding at her monthly period, which rendered her again prostrate. This was arrested by means of acetate of lead and ergot; and, on examination, it was ascertained that the hæmorrhage arose from the presence of soft polypous growths; but she was in too distressed a state to submit to any operative interference on the part of the surgeon. She recommenced, however, with the steel and albumen, and diuretics, which again had the effect of removing the swellings and restoring her strength in some degree, till the 24th of April, when hæmorrhage to an alarming extent again set in, but was stopped, as before, by the lead and ergot. She did not rally, however, as before, but continued to be troubled with frequent vomitings; while her face was blanched and swollen, and her limbs distended with fluid. The albumen also was as great as ever. The vomiting was subdued by means of calumba and hydrocyanic acid, and table-spoonfuls of food at a time; but the month had not elapsed ere she had, on the 20th of May, another profuse hæmorrhage, which was stopped by ergot,

with sulphuric acid and opium. Some time after this, she did submit to the operation for removal of polypus. Had her disease consisted in that alone, doubtless she might speedily have recovered; but it had been delayed too long, and the kidney disease had gone too far, and altogether she was left too destitute of constitutional stamina for any hope of recovery, and she died not long thereafter.

The case is adduced, not as an example of the beneficial effects of the remedies (though at one period they evidently were tending to good results, had they been persevered with, and the hæmorrhages effectually stopped by an earlier operation), but as instancing the connexion between this disease and the drainage of the red particles of the blood from the body, as well as the difficulty of managing such persons.

ART. 71.—*On diseases of the Kidney accompanied by Albuminuria.*
By Dr. DICKINSON, Medical Registrar to St. George's Hospital, &c.

(*Proceedings of the Royal Med. and Chir. Soc.*, May 28, 1861.)

This paper is intended as a sequel to one of which the abstract is to be found in a former volume (XXXII, p. 127). The purpose of the first paper was to show, on anatomical grounds, that the disease which occasions the smooth mottled kidney is essentially different from that which gives a granular surface to the organ. The first is characterised by excess of cell-growth within the tubes, and is in fact chronic nephritis; while the other is the result of a degeneration commencing in the intertubular structures. The purpose of the present communication is to add the clinical details. These were obtained, in part, from an analysis of 369 well-marked fatal cases of renal disease extracted from the records of St. George's Hospital during a period of ten years, and some of the results were given in a table. Other particulars were obtained from a more minute examination of cases under the author's notice during life, taking care to use only those in whom the state of the kidney had been attested by post-mortem examination.

Both forms of disease are more frequent in the male than in the female sex: the smooth mottled kidney nearly in the rate of three to one; the granular nearly in that of two to one.

The tubular disease (chronic nephritis) is peculiar to the earlier periods of life, attaining its greatest frequency between the ages of twenty and thirty. Granular degeneration is never seen except in adults, and is most common after the age of forty. These peculiarities are of the highest importance in the history of the complaints, and probably account for some of their minor differences. A further argument for the independence of the two conditions is to be deduced from the fact that persons with predispositions to gout and to the formation of tubercle are especially liable to granular degeneration.

The clinical history of chronic nephritis, or the tubular disease, is then briefly treated. This complaint owes its origin to various causes of renal hyperæmia, exposure of the surface of the body to cold, the elimination of the poisons of scarlatina and other exanthemata, the

irritation of turpentine or cantharides given medicinally, the vicarious secretion of bile, or the congestion of successive pregnancies. The usual duration of the disorder appears to be within six months; twenty-six out of thirty-four fatal cases under the author's own observation terminated within this period, while only two survived the year.

Dropsy is the most invariable symptom of the disease, next to albuminuria. It invades the cellular tissue, the pleuræ, the peritoneum, and the pericardium, with a frequency corresponding to the order in which they are mentioned.

The frequent occurrence of inflammation of the serous membranes and of the lungs in this complaint is contrasted with the great liability to bronchitis which accompanies granular degeneration.

Diarrhœa, especially in the later stages, and pain in the loins, are greatly more frequent, while nocturnal micturition is less so, than with the more chronic form of disease.

Coma often occurs as the sequel of epileptic attacks, particularly in persons who have been reduced by vomiting or diarrhœa.

The urine is scanty, except during the later stages, or while a temporary attack is passing away. It is usually acid, and often deposits uric acid and urate of soda. It is discoloured with blood in a large proportion of cases, especially at the outset, and yields a bulky precipitate of albumen, independently of any such admixture. The specific gravity ranges from 1010 to 1030, but on the whole does not depart much from the limits of health. The microscopic characters of the sediment were considered somewhat in detail. Renal epithelium is deposited in a natural state, or containing oil-globules, or converted into pus-cells. The fibrinous cylinders are to be regarded as *casts* only of the straight tubes. Though some of their materials are derived from other portions of the gland, the fibrin which gives them consistency is here supplied. They are of four varieties: transparent, uniform, glassy cylinders; similar cylinders imbedding entire epithelial cells: casts of granular appearance, containing epithelium in a state of disintegration; and, lastly, such as contain blood-corpuscles. All these forms are incidental to the disease, the casts imbedding entire epithelial cells being the most characteristic.

Granular degeneration of the kidney is the result of gradual changes originating in the intertubular tissues of the organ, and depending upon some constitutional vice which gains ascendancy with advancing years. Large portions of the secreting tubes are actually destroyed by the process, and the blood-vessels of the gland are rendered impervious. The gradual change which the patient undergoes from health to infirmity corresponds with the slowly-increasing incapacity of the gland. This disorder can scarcely ever be attributed to any external cause, contrasting, in this respect, with what is observed in the other form of disease. The patient, perhaps, has for months a little fulness of the ankles at night, to which he does not pay much attention. The features become sharp, and the complexion sallow; and it is found, on inquiry, that for long previously the urine has been copious, and passed with frequency, especially at night. The indefinite nature of its accession renders it impossible to fix accurately the

duration of the disease. In twenty-one cases, where the advent of the first symptom was made a matter of particular inquiry, this was found to have appeared at periods varying from four weeks to ten years before the death of the patient.

Dropsical effusion is rather incidental to the disease than characteristic of it. In many cases it is altogether absent; in others, only slight in extent. It only comes on in the later periods of the disease, when the urine is no longer profuse. The bloated aspect and ivory pallor peculiar to chronic nephritis are often contrasted, when the kidneys are granular, with a withered aspect, sharpened features, and a muddy skin.

Peritonitis, pleurisy, and pneumonia are comparatively rare, while the frequency of bronchitis is greater than with the other variety of disease. Increased frequency of micturition is usually met with, and often gives the first indication of organic change; while diarrhoea and pain in the loins are infrequent.

An inquiry into the association of granular degeneration of the kidney with valvular disease of the heart leads to the conclusion, that this is more frequent than can be attributed to accidental coincidence, and that the renal disturbance is usually the primary affection.

Evidence is brought to show that extravasation of blood within the cranium is peculiarly apt to take place in connexion with granular degeneration of the kidney; in fact, that the latter disorder is present in nearly one half of the cases of apoplexy subjected to examination in St. George's Hospital. The mode of connexion between the two diseases was discussed.

Other "head symptoms" are apt to occur in this disease; either epileptic convulsions, as in chronic nephritis, or, what is in some measure characteristic, patients often pass gradually into a comatose state without any such warning, the change being preceded by dimness of sight, giddiness, peculiarity of manner, or delirium.

The urine is increased in quantity, except in the later periods, exactly the opposite to what takes place with the more acute disorder. It is usually paler than natural, and is comparatively seldom discoloured with blood. The albumen is often in minute quantity, and the specific gravity low, varying from 1008 to 1020. The casts are various in character, but those most often present are of coarse granular texture, and may be regarded as very characteristic of the disease.

ART. 72.—*On Diabetes.* By M. HÉRARD.

(*Journ. de Med. et de Chir. Pratiq.*, June, 1861.)

In some clinical remarks by M. Hérard, upon a case of diabetes recently in the Hôtel Dieu at Paris, are these:

"Since 1856, M. Marchal has invited the attention of the profession to the connexion between certain gangrenous symptoms and diabetes. One of the patients observed by this surgeon presented spontaneous mortification of the great toe; it did not occur to the medical attendants to examine the urine, the toe was amputated, and a cure followed.

Some time afterwards diabetes was discovered, and M. Bouchardat's treatment was adopted, but most imperfectly adhered to. Gangrene recurred on the opposite side of the body, and proved fatal. At that period this was considered to be a mere coincidence, but analogous cases have since been so frequently recorded, that it now is perfectly clear that many forms of spontaneous and senile gangrene are closely connected with diabetes. When, therefore, anthrax or gangrene appears spontaneously, you should suspect the presence of diabetes, and immediately investigate the condition of the urine, because if the suspicion proves to be accurate, internal treatment may possibly ward off the return of mortification. This examination is again indispensable in cases of rapid diminution of the eye-sight, of amblyopia, or amaurosis, and also when unexplained wasting of the body has taken place, or when any doubts exist as to the real nature of a series of morbid symptoms."

In another part of this lecture, speaking about treatment, M. Hérard declares that he has always found the exhibition of alkalies most beneficial. These medicines doubtless do not effect a radical cure, but it is a remarkable and interesting fact that their influence is felt in a very few hours. Exhibit Vichy water, or bicarbonate of soda, as above, and the thirst, the excessive secretion of urine, and the general debility, will disappear with really extraordinary rapidity. Doubtless alkaline agents, persevered in for too long a time, may be injurious; but if they induce any untoward symptoms, replace them by rigorously enforced bodily exercise, a system which alone has often succeeded in checking glycohaemia. Exercise is, moreover, useful in allowing the patient to discontinue the use of gluten bread, which promptly offends the taste, and can then be replaced, as M. Fauconneau-Dufresnes suggests, by dry toast.

In his own practice, M. Hérard merely diminishes the amount of farinaceous food, but does not prohibit it altogether. He directs, also, his attention at once to the condition of the skin, and endeavours to promote its action by exercise, in combination with the wearing of new flannel, alkaline or sulphurous and gelatinous baths, the water-cure, and internally bark and Bordeaux wine, if not counterindicated by any symptoms.

ART. 73.—*Case of Diabetes treated successfully.*

By Mr. MICHAEL FOSTER, of Hemlington.

(*British Med. Journal*, Oct. 19, 1861.)

CASE.—February 16th, 1861. Mr. C—, farmer, æt. 32, married, the father of one child, having always had excellent health, stated "that since the severe frost in December last, when he was present at a skating match, he has felt unwell." He had become weak, had lost flesh from 13½ stone in weight to 12 stone 1 lb. He had intense thirst, constant micturition, especially at night; "it might be said to be always running away." What was most noticed was that, from being robust and strong, he could now "scarcely walk into his fields a few yards without being tired." He passed two gallons of urine during the day and night, of specific gravity 1045. When

tested by liquor potassæ, it gave a deep treacle colour. The treatment consisted of twenty minims of chlorodyne four times a day. The diet was green vegetables, milk, eggs, captain's biscuits, &c.

March 13th.—He had improved very much in general health. The quantity of urine was less, but there was no diminution of sugar. The specific gravity was the same.

April 14th.—He was better. There was no change in the specific gravity of the urine, nor in its reaction to tests. He began the bread made from the "prepared bran," as directed in Dr. Camplin's interesting little book on 'Diabetes.'

April 20th.—The specific gravity of the urine was 1040, and it contained less sugar.

May 4th.—The specific gravity was 1035; there was less sugar. Twenty minims of chlorodyne were ordered three times a day.

May 17th.—The specific gravity was 1020; there was no sugar.

June 8th.—The same condition continued. Twenty minims of chlorodyne were ordered to be taken once a day.

June 15th.—The specific gravity of the urine was 1025: it contained no sugar.

June 29th.—The specific gravity was 1035; there was no sugar. (The weather was very hot.) The quantity of urine was two pints day and night. The patient's weight was $12\frac{1}{2}$ stone. He expressed himself "quite well"—"not quite so strong as before. He continued the bran-bread, and diet free from sugar and starch.

ART. 74.—*On the use of Ergot in Spermatorrhœa, congestion and irritation of the Genital Organs in the male.* By Dr. C. L. MITCHELL.

(*American Medical Monthly*, April, 1861.)

As the action of ergot is chiefly directed to the *generative organs* of the female, it seemed to the author a fair inference that it would produce a similar effect on the corresponding organs of the male, they being supplied with a set of nerves of like origin. He accordingly tried it in the following cases.

CASE 1.—The first was that of a gentleman, a lawyer by profession, who applied for relief from seminal weakness. The emissions, he said, occurred chiefly at night; sometimes several nights in succession; sometimes every second or every third night. At no time were these consecutive nights passed without their appearance. Whenever they occurred, whether nightly, or at intervals of one or two nights, there were generally three emissions within six hours. They were always attended with a sense of exhaustion, a painful feeling of weariness, and extreme indisposition to make the slightest effort. For three years he had been subject to these frequent and prostrating discharges, until his gait had become feeble and infirm, his appetite was gone, his complexion pale, his eye languid and lustreless, and his expression of face so lacking in tone and energy as to suggest the idea of commencing idiocy. His professional pursuits were seriously interfered with, and almost suspended.

A carefully regulated diet, exercise, and sleep, with the use of camphor, had given but temporary alleviation, and but little if any improvement in his general health. Ergot was now resorted to, from thirty to sixty grains being administered daily, and was followed with an immediate change for the

better. The discharges diminished rapidly in quantity and frequency, the appetite improved, and the strength of mind and body perceptibly increased. In less than a month he was feeling better than he had done for a year previously. He subsequently married, and has since had but occasional returns of his complaint.

CASE 2.—The second case was that of a physician, forty years of age, practising in the malarious districts of Ohio and Michigan. He was a gentleman of intelligence and education, and surrounded by an interesting family. His field of practice was wide, and fatigue and exposure had made him subject to a very painful form of intermittent. To enable him to continue his duties, he warded off the attacks of his disease by opiates, until he became a confirmed opium-eater. Soon after the habitual use of opium was commenced, he became subject to frequent seminal emissions, and under the combined influence of these two causes, in less than four years he became almost imbecile. His practice was abandoned, his family scattered, and he was received as a confirmed invalid in the house of a relative, then living in Brooklyn. Several efforts were made by physicians in New York and in this city to break up his habit of taking opium, and if possible restore him to health and usefulness. He was willing to submit to any course of treatment that might be deemed best, even if the attempt should be perilous to life; consenting to be locked in a room, and to take nothing but what was given by his attendant. But every attempt to reduce the quantity of opium was followed by such alarming symptoms of sinking, that it was thought best not to persist in them.

When the patient came under Dr. Mitchell's care he was much emaciated, without appetite, subject to frequent evacuations of the bowels, and so weak as to be barely able to walk slowly across the room three or four times. His mind was in such a state that he could not read five minutes without inducing distressing nervous symptoms, and he was unable to write two consecutive sentences. He had been long subject to involuntary seminal emissions, a discharge occurring at every stool, and each amounting, as he supposed, to from one-third to one-half a drachm.

Warned by the experience of others, a diminution of the opiate was not at first advised, but efforts were mainly directed to building up the strength. His debility seemed too great to admit of the withdrawal of any stimulus that could contribute to his support. His diet consisted of animal broths, and such articles as his enfeebled stomach could best dispose of. Ergot was given in conjunction with camphor, to remove, if possible, the exhausting seminal emissions, and we had the gratification of seeing them entirely arrested in seven days from the commencement of the treatment. At this stage of the treatment a systematic reduction of his opiate was entered upon. Thinking that the system had not time to accommodate itself to a daily reduction, even though the reduction be but one drop from each dose, Dr. Mitchell made a diminution of ten drops at once, and continued the same dose until the patient felt that he had become accustomed to it; in other words, that the reduced quantity had all the sustaining effects of the original allowance. The dose was then reduced by ten drops more, and the reduced quantity continued till the wants of the system were met by it. Generally a change was made every seven days, but sometimes the same quantity was continued undiminished for ten or twelve days. Just in proportion as the opium was diminished, its place was supplied with increasing doses of quinine. In less than three months the morbid appetite was mastered, the mental wretchedness and bodily weakness had given place to cheerfulness and hope, and some degree of vigour and strength. Not long after Dr. Mitchell

received a letter of three closely-written pages, which in no point evinced any mental deficiency, and giving assurance that opium was no longer a necessity to him.

CASE 3.—The third case was that of a student of medicine, about thirty years of age, who applied for relief from "stricture of the urethra," as he termed it. He complained of distressing pain about the neck of the bladder, accompanied with an irresistible desire to pass water every half hour. At times he was able to refrain for an hour. At night his rest was constantly interrupted by calls for micturition, and his sleep entirely prevented by painful erections of the penis, unless allayed by morphine in considerable doses. In evacuating the bladder, the urine dribbled away by drops, or flowed in a small cork-screw-shaped stream, with sensation of scalding. From five to ten minutes were requisite to discharge from an ounce to an ounce and a half of water. The lips of the urethra were swollen, everted, and red, and gave place to a discharge of what appeared to be viscid mucus. This attack had continued five days and nights.

He had suffered from several attacks following bilious fever, while residing at the West, a few years previously. He was then in the habit of relieving the priapism and inducing sleep by the free use of morphia, and says that, although under the care of good medical advisers in St. Louis, no remedies but opiates seemed of any avail in allaying his distress. The duration of the attacks usually extended to several weeks, the symptoms subsiding gradually.

Ergot and camphor were now prescribed, in doses of ten grains of ergot and three grains of camphor, repeated every three hours. In less than thirty minutes after the first dose, the distressing sensation about the neck of the bladder disappeared, and urine was passed freely, in a full stream, and without pain. After the third dose he felt himself, as he expressed it, "free from all inflammation of the mucous membrane of the urethra." He left the city, and three weeks after wrote "that he continues well, that he passes water naturally, and has received great benefit from the ergot in relieving the erections at night, and quieting the irritability of the bladder."

In this case the peculiar efficiency of ergot in relieving congestion was clearly demonstrated. Not only were the painful sensations of the patient promptly relieved, but the engorged state of the mucous lining of the urethra, the existence of which was obvious to the sight, quickly and completely removed.

For ten years past 'Dr. Mitchell has used no remedy for spermatorrhœa but ergot, and with marked success. Several of his medical friends also have used the same medicine, and, in most instances, so far as he has heard from them, with gratifying results.

(F) CONCERNING THE CUTANEOUS SYSTEM.

ART. 75 — *On the diagnosis of Syphilitic from Non-syphilitic Psoriasis.*

By Dr. T. McCALL ANDERSON, Physician to the Dispensary for Skin Diseases, Glasgow.

(*Glasgow Med. Journal*, July, 1861.)

The following table is a *resumé* of the principal points in this paper:

SYPHILITIC PSORIASIS.

1. Eruption *not usually* very extensive.

NON-SYPHILITIC PSORIASIS.

1. Eruption *often* very extensive.

2. Patches usually very small, and in shape of spots (size of a split pea), or of *small* circles or segments of circles (seldom more than an inch in diameter).

3. Eruption not usually on the elbows and knees; more on the inner than the outer aspect of limbs. When limited to soles or palms, usually syphilitic.

4. Eruption usually of a distinctly coppery tint, after it has become chronic; sometimes very dark, even nearly black (*psoriasis nigricans*).

5. Scales thin; not so imbricated; often grayish.

6. May last months, or even one or two years, when no treatment employed.

7. Almost always commences after puberty, and usually after twenty.

8. Rarely if ever itchy.

9. A relapse not usual after *all trace* of the first eruption has *completely* disappeared.

10. Can often be traced to a hard chancre.

11. Patient *may* be cachectic, and concomitant symptoms detected; *e.g.* roseola syphilitica, lichen syphiliticus, condylomata, sore throat, alopecia, &c.

12. Removed almost invariably by mercury.

2. Patches *often* very large and irregular. When circular, circles often two or three inches in diameter.

3. Eruption on any part of the body, but *almost* invariably on the *elbows and knees also*.

4. Patches of a dusky-red or light coppery colour.

5. Scales thick, imbricated, white, and silvery.

6. Often of five, ten, fifteen, twenty, or thirty years' duration, or even almost a whole lifetime.

7. Most cases (not all) commence before the age of twenty.

8. Sometimes not itchy; sometimes intolerably so; generally *slightly* itchy *now and then*.

9. Relapses are the rule, and are often very numerous.

10. Can often be traced back to hereditary transmission.

11. Patient in robust general health; bad health incompatible with the eruption, and the eruption is antagonistic to scrofula.

12. In the majority of cases removed partially or entirely by arsenic.

ART. 76.—On Acne. By Dr. HEBRA, of Vienna.

(*Wien Allg. Med. Zeitung*, No. 26—28, 1860; and *Edin. Med. Journal*, July, 1861.)

Hebra distinguishes three forms of acne,—*acne disseminata*, *acne rosacea*, and *acne mentagra* (*Sycosis*). The common characteristic of these varieties is an inflammation of the sebaceous glands, as the result of which red nodules are formed, which vary from the size of a millet seed or lentil to that of a pea, and which may be found simultaneously in all stages of development.

1. *Acne disseminata*, simply called acne, manifests itself, as is well known, in the form of little nodules on the face and thorax, which vary from the size of a millet seed to that of a pea. It always commences by the formation of pimples (comedones); the follicles are obstructed with sebaceous matter, the escape of which is prevented; and as more material accumulates, inflammatory phenomena manifest themselves. Pus corpuscles form, and a pustule results; if the head of this is rubbed off, a drop of pus and the sebaceous matter escape. In many cases, where the inflammation extends deeper, a slight scar remains, corresponding to a follicle which has been destroyed. If the nodules are of smaller size than usual, the eruption is termed *acne punctata*; if two nodules run into one another, they often assume the form of a grain of barley or oats, and the name *acne hordeolata* is applied. The same process occurs on the eyelids, under the name of *hordeolum*, where the shape of the meibomian glands gives a longish basis to the nodule. According as the little swellings contain purulent matter, or an unsoftened inflammatory product, they are distinguished as constituting *acne pustulosa* and *acne indurata*. In most cases acne makes its first appearance at particular periods of life, generally about the time of puberty, seldom after the thirtieth year. Many individuals suffer from this disease during their whole life; and many to such a degree, that their whole body is covered with the eruption. Hebra saw a patient from Athens, who was affected with acne of the whole body to such an extreme degree, that it had been taken for a case of elephantiasis Græcorum, and had been treated as such. On closer examination, however, it was found that the nodules were of a doughy consistence; and on pressure, first a little sebaceous matter, and then a dirty red discharge, were evacuated. After the real nature of the disease had been recognised, a speedy cure was effected.

Treatment.—If we have to do with a slight case of the disease, we may employ simple warm sulphur baths, or in the case of acne of the face, vapour baths, as well as washing with soft soap, or with a solution of one drachm of caustic potash in a pound of distilled water. The washing or smearing with soft soap may be practised in the morning, whilst towards night a mixture of equal parts of precipitated sulphur and water, or a paste, consisting of a drachm of precipitated sulphur in an ounce of alcohol or camphorated spirit, may be applied by means of a sponge or a hair pencil. The following morning the sulphur paste is most readily removed by means of saponated spirit. During the day it is desirable to apply (cocoa-butter) crème celeste, or any other fatty matter. Corrosive sublimate also, in the proportion of five grains to an ounce of distilled water, and applied by a compress for two hours, is very useful (especially when the forehead is affected), as it removes the superficial layers of epidermis. A lotion frequently applied, and sold under the name of virgin's milk (*jungfraumilch*), consists of a grain of corrosive sublimate, two drachms of tincture of benzoin, and six ounces of distilled water, or emulsion of bitter almonds. With this lotion the affected parts are to be moistened twice or thrice daily, by means of a sponge, the parts not being subsequently dried; and in eight days the skin generally becomes

fresh and clean. Another good plan, is to apply in the evening sulphur soap over the affected part, as is done in shaving, and in the morning to wash it away with alcohol, or with equal parts of alcohol and sulphuric ether, or with tincture of benzoin or myrrh. In higher forms of the disease, the nodules may be punctured with a lancet or cataract needle, by which the sebaceous matter and a drop of blood and pus are evacuated; cold compresses are then applied, and the treatment above recommended put in force. At the same time, other pimples are evacuated by pressure with the fingers, by tweezers, or by dry cupping. For softening the contents of the sebaceous glands, warm baths, along with a preparation of potash or soft soap, are most efficacious. In acne of the face, vapour baths are preferable.

2. *Acne rosacea* consists essentially, not merely in an inflammation of the hair bulbs and sebaceous follicles of the nose, the cheeks, and the rest of the face, but still more in a formation of blood-vessels and connective tissue. It invariably begins with a redness, which disappears on pressure, but immediately returns, and gradually assumes a coppery, or bluish-red colour. In addition to the enlargement of the vessels, which may be seen with the naked eye, or still better with a lens, swelling, not of an oedematous character, is present, the surface is uneven, the hair bulbs and the sebaceous follicles are much altered, and the openings of the latter are widely open. At first the new formations are small, consisting of nodules of the size of a lentil or pea; but they gradually become larger, and are either of the same colour as the surrounding parts, or of an intensely red hue; there is often at the same time an inflammation of the sebaceous glands, in the form of small pimples of acne. If the disease lasts for years, the nodules and knobs assume a considerable size; and as their weight causes dragging, the new formations become pedunculated, and hang down as polypi or pear-shaped tumours. With regard to its etiology, acne rosacea frequently appears in women who are affected with anomalies of the sexual function,—for example, in sterile women, in those who suffer from uterine disease and congestion of the head, in old virgins, or in women about the climacteric age. Further, this form of the disease is observed in persons who suffer from hæmorrhoids, in those who lead an habitually sedentary life, but above all, in the intemperate, especially among wine and spirit, not so much among beer drinkers. It is interesting to notice, that the changes on the nose present differences, according to what the favorite drink may be. The spirit-nose (*schnapsnose*) is red, but scarcely increases in size. The wine-nose generally presents the largest excrescences. The beer-nose is less red, but more oedematous; it is bloated. It is most generally in wine countries that acne rosacea is met with. In the treatment of this disease, any probable causes, such as the presence of hæmorrhoids, or the existence of uterine disease, demand the first consideration. As to local treatment, where there is simple hyperemia and dilatation of the capillaries, the afferent vessels may be cut across, or touched with a pointed piece of nitrate of silver. Excrescences, when present, must be removed by operation.

3. *Acne mentagra* (*Sycosis*) generally occurs on the parts of the face provided with hair, especially in young men. Not only may the beard

be affected, but also the eyebrows and eyelashes, more rarely the axillæ and the pudenda. Red nodules form, of the size of a pea or lentil, or still smaller, at the top of which a pustule quickly forms, and of which the centre is always perforated by a hair. Sometimes the swellings are subcutaneous, and can only be recognised by the touch; but even by this time they consist, as can be proved by making an incision into them, of a pustule, the pus being situated deeply. When the pus arrives at the surface, the pustule becomes changed into a scab, from which, in its turn, fresh suppuration arises. If the pimples are closely set together, a coherent scab may be formed. If left to itself, the disease generally remains unchanged for many years, the same changes being constantly repeated; it is only exceptionally that a spontaneous cure occurs. The etiology of the disease is not clear; it is, however, certain, that neither syphilis, scrofulosis, arthritis, or any other dyscrasia, is connected with it. Hebra has recently noticed, that sycosis may sometimes develop itself from eczema, particularly in the case of the eyelids. Of the different methods proposed for the cure of this disease, little definite can be said. The pulling out the affected hairs has, according to Wertheim, given in many cases satisfactory results. Hebra has the affected part cleaned with soap, and so forth, the hair shaved, and every morning the little hairs pulled out from the pustules, and a paste applied, consisting of equal parts of precipitated sulphur and alcohol, which in the evening is replaced by a fresh one. By this means the cure is ordinarily speedy, often within fourteen days.

ART. 77.—*On the treatment of Mentagra.*

By M. DEVERGIE, Physician to the Hôpital St. Louis, Paris.

(*Journ. de Méd. et de Chir. Prat.*, July, 1861.)

Treatment by depilation has been extolled by M. Bazin, after microscopic investigations confirmative of M. Grubi's views on the existence of a special fungus in mentagra. M. Bazin asserts that the fungus is always present, an opinion which M. Devergie has endeavoured to confute in his 'Treatise on Diseases of the Skin.' According to this author, mentagra is not always a local symptom, but may, like most cutaneous affections, be traced to the agency of some general cause. It is not always preceded by *herpes*, a fungoid complaint, or by *pityriasis*. Although the latter is frequently observed before the appearance of mentagra, it is not an invariable prelude, and in the eight cases under consideration, five of the patients only acknowledged the antecedent existence of furfuraceous or herpetic eruptions. Sycosis or mentagra may therefore be accompanied or not by the fungoid production, and the parasite may further be permanent or transitory. The disease, moreover, in M. Devergie's opinion, does not consist in the deterioration of the hair, or of its bulb by the fungus; the bulb is hypertrophied, and incarcerated in its envelope, the adjacent cellular tissue is thickened, congested and inflamed; hence the hard pustules, the summit of which only yields suppuration, and which, by their appearance and the concomitant hypertrophy of all the anatomical

elements of the skin, justify, to a certain extent, the epithet *tubercular* given to the disease.

On the other hand, whether the parasite be present or not, the inflammatory condition of the skin causes a considerable amount of hair to be detached and to fall away in the poultices.

M. Bazin's observations and opinions led to the adoption of a new treatment of sycosis, founded upon the destruction of the fungus in which the complaint was asserted to originate, it being naturally inferred that the removal of the cause would induce the disappearance of its effects. For this purpose, M. Bazin prescribed fomentations several times a day over the diseased part with a solution of bichloride of mercury, and depilation of the surface beyond the limits of the eruption, in order to remove, with their bulb, all the hairs invaded by the fungoid growth. This was a perfectly rational line of conduct, and the method was in consequence adopted by very many practitioners.

Anxious to test the merits of this treatment, M. Devergie not only instituted microscopic inquiry into the subject, but for two years applied the method and watched its effects; he has now for two years almost entirely abandoned it, and has reverted to the remedies he was previously in the habit of using. In this course he has been guided by a twofold motive: depilation, in the first place, is sometimes very painful, and more particularly in the cases in which it is utterly ineffectual. M. Devergie adduces, in illustration, the cases of two patients who underwent the operation with much perseverance in his wards, and who were not in the least degree improved, although in one depilation was performed seventeen, and in the other no less than forty successive times. These two cases, taken at random amongst those which formed the object of his experimental research, struck him as very forcible. In the second place, before the adoption of the system of depilation, the patients were as effectively and rapidly cured as at present. M. Devergie has resorted in analogous cases to both modes of treatment comparatively, and ascertained that the duration of treatment was often longer when the hair was removed. It does not, moreover, says he, appear very necessary to extract hair which has a natural tendency to fall. If the hair is sound, it remains adherent to the skin; if diseased, it is spontaneously detached. This argument might be met by the objection that depilation prevents the propagation of the fungus; but it should not be forgotten that, although this is applicable to a diseased surface abandoned to the efforts of nature, it cannot apply to a part covered with poultices and other dressings, which prevent germination.

It may perhaps be observed that depilation not only removes the hair and stops vegetation, but also plucks out the diseased bulb into which the fungus has penetrated.

This would seem a consequence of microscopic observation, but facts contradict it. M. Devergie unhesitatingly declares that depilation is indispensable at most in five or six cases per cent. of mentagra; and, a singular circumstance, in the peculiar pathological variety which requires the operation, scarcely ever are any parasitic growths discovered in the hair thus removed.

If the classified forms of mentagra are considered, and not sycosis

only, but the diseases of the chin, it will be found that,—1. *herpes circinnatus* yields to pomades, sulphurous baths, and cade oil; 2, that *simple impetigo* is connected with a lymphatic state of the system requiring general treatment; and 3, that the same remark applies to *eczema* of the lips and chin. In the two latter complaints no parasitic fungus is present, but in herpes it distinctly exists, and yet depilation is perfectly useless; 4, that *pityriasis* of the beard is another very obstinate parasitic affection, very difficult of cure, because the eruption gradually spreads; but here depilation is extremely painful, because the roots of the hair preserve the solidity of their implantation, and the procedure requires on the part of the operator so great a degree of dexterity, and on the part of the patient so much patience and resignation, that favorable results are scarcely to be expected. Not long since, M. Devergie was consulted by a gentleman who had long submitted without benefit to depilation, and changed his medical adviser, who however was a perfectly trustworthy practitioner, accustomed to the treatment of skin-disease; the patient was cured in a month, although the plucking was discontinued.

When impetiginous sycosis has not originated in the nasal fossæ, but on the lip, it is extremely obstinate; a complete cure has to all appearance been effected, when in one night, and without any appreciable cause, eight or ten new pustules become developed. The disease may thus continue indefinitely for months and years. It is in such cases that depilation proves most efficacious, and yet here the fungus is most seldom found. *Sycosis*, or genuine mentagra, is often ushered in by herpes or pityriasis, but not invariably; all the patients in the hospital attribute, and not without reason, the disease to the use of soiled razors, and to the habit of getting shaved by a barber. The remark is current among labouring men. A razor manufacturer of the last century wrote a pamphlet, not destitute of merit, on the disadvantages attendant on the promiscuous use of razors. However this may be, the disease almost always appears four or five days after a scratch or a slight cut inflicted inadvertently on the skin. Here we find a material difference between the cases adduced by M. Bazin, and those recorded by M. Devergie, in the account of the incipient form and first stage of the eruption. One patient avers that he first observed a furfuraceous patch; another declares that pimples first appeared, and that, in the course of a fortnight or three weeks, the disease acquired its present aspect, varying in extent from half an inch to the entire surface of the chin, the latter being increased to twice or thrice its natural size. M. Devergie, who has no preconceived theory on the subject, accepts the assertions of both classes of patients; some subjects become affected with genuine *herpes*, which may preserve for many months its characteristic aspect. He has, at present, under his care a plumber who for eighteen months has suffered from herpes in the beard, and who refers the complaint to the use of a dirty razor. In this case the eruption has invaded the mouth and neck, but since eighteen months not a single pustule of mentagra has appeared.

Whether or not herpes may have preceded, M. Devergie's treatment is the same for all cases of genuine mentagra or *sycosis*.

1. In the acute stage especially, he endeavours to establish a counter-irritant action on the bowels by the exhibition of an infusion of half a drachm of senna leaves in a teacupful of heart's ease tea.

2. Every second day, he causes the inflamed part to be steamed. It would, at first sight, seem highly improper to have recourse to the steam-douche in a disease in which inflammatory action is so obvious, and yet we must say that the effects of steaming are truly remarkable. It induces, it is true, a little transient excitement, but its general action is sedative, it is borne with ease, and is certainly very efficacious.

3. The affected part should be covered at night, and, if possible, in the daytime also, with cold or almost cold and very diffluent linseed poultices.

This course of treatment speedily subdues the inflammation; the swelling subsides and suppuration decreases: the tubercles or pustules separate from each other, and the intervening skin soon recovers its natural softness.

After a time, the complaint seems to remain stationary, and it is then proper to have recourse to resolute agents, extract of saturn, for instance; M. Devergie recommends also the part to be painted over, every four or five days, with a solution containing one fifth of its weight of nitrate of silver; the douches should now be left off, and the nitrate of silver lotion gradually discontinued, in proportion to the diminution in size of the diseased region.

When a few isolated and indolent tubercles alone remain, they should be lightly touched with lunar caustic, and a complete cure soon follows. The patient should be advised either to grow his beard for a while, or at least to trim it with scissors only, and to resort to the razor at as distant a period as possible.

The aperient medication is, of course, only applicable in the acute stage, and in the period which immediately precedes resolution.

ART. 78.—*A contribution to the history of Sclerema in Adults.* (1) By Dr. ARNING: and a case of this affection. (2) By Dr. FÖRSTER, of Würzburg.

(1) *Würzburger Med. Zeitschr.*, Nos. 2 & 3, 1861; and (2) *Med. Times and Gaz.*, Oct. 12, 1861.)

1. The sclerema of adults is a malady at once rare and little understood. It occurs at ages varying from eight to sixty-seven, and in women more frequently than in men. Dr. Arning has collected eighteen cases, and in these, no less than fifteen of the patients were women. Exposure to cold would appear to be an almost constant cause of the malady. In the great majority of cases, moreover, it was preceded by rheumatic symptoms, acute or chronic, and more or less protracted in duration; and in one case, where the face was affected, there were several previous attacks of erysipelas extending over several years. The characteristic symptom is a thickened, indurated, non-elastic skin, of a palish, brownish colour, having a parchment-like appearance, and restraining or altogether preventing the movements of the subjacent parts. These changes are confined to the

skin itself and to the subcutaneous cellular tissue; they do not extend to the deeper parts. These deeper parts, however, are generally more or less atrophied—a change which seems to be in part due to the compression arising from the shrinking which takes place, sooner or later, in the indurated skin. In adults the upper half of the body is almost exclusively affected; the face first of all, then the neck, the nuchal region, and the chest. In a few instances, however, there were a few isolated patches in the lower half of the body, and, in two instances, the skin was implicated universally. Sometimes the tongue was also affected, in which case the acts of speaking and swallowing are greatly hampered. The temperature is generally normal, and so also are perspiration and sensibility. The general health, also, would seem to be good in all essential particulars; but in more than one instance the skin was somewhat cooler than it ought to be, and the sensibility duller; and once or twice, also, the affection of the skin of the chest gave rise to dyspnœa, or palpitation, or cough. Once developed, it may continue for months and years, remaining without change or departing gradually, without ever disappearing altogether. Most generally it begins in the neck, and extends slowly to neighbouring parts, but not always; sometimes, indeed, it may attack almost the whole of the upper parts of the body at once, and reach its full development in a few days. As yet all means of treatment have proved of little use. In a case under the care of Dr. Arning himself, mercurials internally and externally, with baths and sudorifics, seemed to do good.

2. The case of Dr. Förster, of Würzburg, is supplied by the foreign correspondent of the 'Medical Times and Gazette,' and it is of especial interest as supplying some information which is not to be met with in Dr. Arning's paper—namely, that which is derived from the examination of the parts after death.

CASE.—The following are a few particulars of the case observed by Professor Förster:—A labourer, æt. 22, was received into the Julius Hospital for an ulcer on the anterior surface of the lower third of the right leg. The ulcer did not spread very far nor deep, but was remarkable for the surrounding parts of the skin being sclerosed. After the ulcer was healed, the patient was discharged, although the hardening of the skin had not disappeared. About nine months afterwards he again came into the hospital, as the scleroma was further developed, and new ulcers had come on. Death from tuberculosis of the lungs ensued two months afterwards. The course of the sclerosis had been as follows: it first proceeded from the neighbourhood of an ulcer on the right leg, and from thence spread over the whole anterior surface of the leg, foot, and thigh. After some time the anterior part of the left lower extremity became also affected. The hardening spread from there, without attacking the loins, to the abdomen, the anterior and lateral parts of the chest, and the upper extremities; the anterior sides of which, the back, the neck, and the head, were not affected, these parts being only of a dirty-white colour. The sclerosed skin gradually became tough, hard as a board, immovable, and of a dark colour, while perspiration and sensation soon entirely ceased. On most places, this condition, after having reached a certain stage, remained stationary, but on others—for instance, on both sides of the thorax—retrogressive metamorphosis took place, and the skin recovered its normal state. On many parts shallow ulcerations came on, the skin began to perspire, the epithelium

peeled off, the secretion ceased, and the parts became dry, smooth, and white.

The microscopical examination made after death showed that the papillæ on these places had entirely disappeared, and the surface of the corium was, therefore, quite smooth. The epidermis was thin, but otherwise normal; the deepest parts of the rete mucosum, which on other places contained much pigment, were colourless in these. On other parts, especially in the extremities, there were deep ulcerations of the corium, generally of small extent, which remained unchanged until death, or healed, and a firm, fibrous, and contracting cicatrix was formed. Above the sternum and the clavicle the skin was 3'' thick, and hard as a board; on the abdomen it was 1½'' thick, and on the extremities 2 to 3''. It was as difficult to cut as the sole of a boot. The connective tissue of the corium was thickened and hardened; the subcutaneous cellular tissue was not atrophied, but had also become firm like the corium. The morbid process had been quite similar to that of sclerosis of the bones. At first the fat had quite disappeared from the meatus of the cellular tissue, and only in the microscopical preparations a few fat-cells could be distinguished between the layers of connective tissue. The loose connective tissue had become quite firm. The elastic fibres of the skin and the subcutaneous cellular tissue were equally changed, with the exception of those places where cicatrices had been formed. The papillæ, the glands, and hair had also retained their normal height and width, and the capillary vessels of the skin appeared to be quite normal. Very few nerves were to be seen, they being evidently covered by the growth of the connective tissue.

The case was, therefore, one of a chronic excessive formation of connective tissue, unaccompanied by fever or local inflammatory symptoms, proceeding from a small point, and from thence spreading almost over the whole of the body. The cause was unknown; and as ulcers and excoriations were observed in the whole course of the illness, it is very probable that the ulcer on the right leg, in the neighbourhood of which the sclerosis was first observed, was preceded by the affection, so that it was not primary, but secondary.

ART. 79.—*On the employment of Powdered Coal-tar and Saponized Coal-tar in the treatment of certain forms of Skin Disease.* By M. DEVERGIE, Physician to the Hôpital St. Louis, Paris.

(*Bull. Gén. de Thér.*, April 15, 1861; and *Med.-Chir. Rev.*, July, 1861.)

Powdered coal-tar was formerly much employed as a disinfectant, but M. Devergie has found it useful in the treatment of some skin diseases. The first case of the latter kind which came under his notice was that of a person suffering from eczema impetiginodes, covering the whole surface of the body, and pouring out an abundant, rather sanious and fetid secretion, followed by thick crusts of a yellowish-gray colour, resembling impetigo scabida or rupia. With the view of destroying the fetid odour which exhaled from the whole of the body, M. Devergie ordered the affected surfaces to be dusted lightly, night and morning, with powdered coal-tar. In two days the smell had entirely disappeared, but the discharge had formed, by combining with the coal-tar, a kind of horny envelope, constituting prominences on various parts of the body, and partly detached, so as to leave spaces where the skin was not covered. But on examining these spaces it was found that the skin was improved in appearance, and no longer secreted any dis-

charge. Three effects had therefore been produced—namely, disinfection, the diminution of the morbid secretion, and the solidification of the crusts. The latter soon became so hard that they formed foreign bodies of a very painful kind to the patient, who could not turn in bed without pressing upon these firm and almost stony substances, which irritated the skin. This inconvenience was relieved by the application of hog's-lard under poultices for several hours daily, and the repeated removal, by cutting, of fragments of the hardened secretion, so that the skin was at length rendered clean. After the successful treatment of this case, M. Devergie employed the powdered coal-tar on a large scale, in rupia, ecthyma cachecticum, zona, pemphigus, ecthyma, herpes, scabies purulenta, impetigo, and eczema. In the generality of cases there was a marked improvement—namely, that in a rather short period the secretion diminished and the inflammation subsided, the skin began to resume its normal condition, at the same time that the painful or disagreeable sensations of the patient were relieved. M. Devergie, in order to ascertain whether the improvement in the successful cases was due to the plaster formed upon the surface, employed common modelling plaster in the same manner as the coal-tar, but he found it very far inferior in its effects. The fact seems to be that tar, which is a vegetable production, is an efficacious medicine in the treatment of cutaneous diseases. In cases of acne, the coal-tar is also beneficial, but its use is attended with certain inconveniences, for it has a grayish colour, and gives a disagreeable appearance to the face; M. Devergie is, therefore, now occupied in determining the question whether creasote, as representing vegetable tar, or phenic acid, as representing mineral tar, might not be substituted for powdered coal-tar.

Powdered coal-tar should never be employed except in very small proportions; the diseased surfaces should be merely dusted with it so that the powder is scarcely visible, and not laid on thick, as is too often done. As to saponized coal-tar it has not yielded well-marked satisfactory results, for the enormous proportion of alcohol which it contains irritates the diseased surfaces in a very short time.

PART II.—SURGERY.

SECT. I.—GENERAL QUESTIONS IN SURGERY.

(A) CONCERNING WOUNDS AND ULCERS.

ART. 80.—*On the different microscopical characters of the Secretions from Infecting and Non-infecting Syphilitic Sores.* By Mr. HENRY LEE, Surgeon to King's College Hospital and to the Lock Hospital.

(*Archives of Medicine*, April, 1861.)

DURING the years 1855 and 1856 a register was kept at the Lock Hospital of the cases which came under Mr. Lee's care, and the characters of the secretions from different kind of syphilitic sores were noted. During the same years a similar record was, for some time, kept at King's College Hospital; but the very large number of patients, and the irregularity of their attendance, prevented the plan being there so fully carried out.

The object of the investigation was to ascertain whether the secretions from the surface of syphilitic sores afforded any characters by which the nature of those sores might be recognised, and especially whether those secretions would furnish a test of the liability of the sores to be propagated by contagion to another part of the same patient's body on the one hand, or of their power of infecting the patients' constitutions on the other.

It became very soon apparent that sores which were the most contagious (*i. e.*, liable to be communicated by contact, or by artificial inoculation to another part of the same patient's body) were the least liable to be infectious (*i. e.*, were the least liable to infect a patient's constitution); and the converse of this was proved to be true, namely, that those sores which were likely to be followed by constitutional infection or secondary symptoms, were not, as a rule, contagious as far as the patients themselves were concerned. It was found that the local contagious disease could be inoculated upon the same patient almost an indefinite number of times; but that the infecting disease, when it had once developed its morbid process, could not again, as a rule, be reproduced either by contact or by artificial inoculation upon the same patient. Upon a patient who had not previously had syphilis it would doubtless

be inoculated readily enough; but from the nature of the case any experiments of this kind were not instituted.

Now, in examining the secretions under the microscope of these two classes of cases, those from the contagious local sores were, as a rule, very much of the same nature. They always presented well-formed pus-globules, so long as their characteristic contagious nature remained; and if a little acetic acid was added to the secretion before it was examined the distinct nuclei of the pus-globules were rendered visible. These nuclei were generally of the same shape and size; and one, two, or three of them might be seen in the space occupied by each pus-globule. Professor Beale has been kind enough to draw these appearances, and they are represented in the accompanying woodcut.

The secretions from the second class of syphilitic sores, namely, those which were not again inoculable upon the same patient, but which were, as a rule, followed by secondary or constitutional symptoms, varied very much more than those of the first class above described. They consisted generally of epithelial debris floating in a transparent fluid; or of globules of various shapes and sizes often matted together. Upon the addition of acetic acid nuclei were sometimes seen to occupy the interior of the globules; but these were again of different sizes and shapes, and of varying degrees of opacity. When care was taken to obtain nothing but the natural secretion from these sores the well-formed pus-globules (with their characteristic nuclei upon the addition of acetic acid) were absent. In some cases it was found difficult to obtain the secretion from the sore unmixed with that of the neighbouring inflamed mucous membrane; in others, the nature of the secretion had been altered by the application of caustics; in others again, the part had become irritated by the prolonged detention of diseased secretions upon its surface, or by mechanical means. In all these instances it was found necessary to distinguish between the natural secretion of the part and that which was produced by the accidental irritation. In order to effect this it was generally found sufficient to apply water dressing to the sores for two or three days. The accidental irritation had then usually subsided, and the natural secretion would be obtained unmixed with other fluids. When thus examined, it was found that the secretion of the sores which could not be inoculated again upon the patients who had them, but which, as a rule, produced secondary symptoms in those patients, did not contain well-formed pus-globules; and that when globules were present in the secretions, they did not, upon the addition of acetic acid, yield the characteristic nuclei of pus. A clear diagnostic sign was then here established between those sores which were in their nature likely to infect a patient's constitution, and those which were not. The first were found to be suppurating local affections, requiring only local treatment; the latter were found to depend upon the adhesive form of inflammation, and to require mercurial and other constitutional treatment.

Fig. 11.



Microscopic appearance of secretion of local suppurating syphilitic sore treated with acetic acid, $\times 700$.

Fig. 12 represents the secretion from an infecting sore treated with acetic acid, and seen under the microscope with a power of 700 diameters.

Fig. 12.



Microscopic appearance of cells of altered epithelium of an infecting sore. $\times 700$.

The mode of distinguishing the different kinds of primary syphilitic sores now described, affords in practice most important and valuable information. By this means a chancre, which, if left to itself, would infect the patient's constitution, may be distinguished from one which will not, even in cases where the ordinary mode of diagnosis fails. Thus, out of a hundred cases that were noted and registered (during the period above mentioned) as presenting, upon microscopic examination of the secretion, the characters of suppurating sores, in two only, as far as Mr. Lee could ascertain, did any constitutional symptoms follow the local affection; and even in these two cases it was satisfactorily made out on further inquiry, that the patients had exposed themselves to more than one source of disease. The contagious suppurating sore in these two cases may, therefore, in reality, have been superadded to, and have masked the non-suppurating infecting sore. On the other hand, during nearly the same period, ninety-five cases were recorded in which the secretion was not purulent, according to the test above mentioned, and these presented the ordinary characters of the primary indurated chancre.

Many of these cases individually were lost sight of after they left the hospital, but during the same period seventy-three cases were noted as having presented constitutional symptoms, where there was evidence of the primary disease having been accompanied by the adhesive, and not by the suppurative inflammation.

ART. 81.—*On Syphilitic Inoculation and its relation to Diagnosis and Treatment.* By Mr. HENRY LEE, Surgeon to the Lock Hospital, &c.

(*Proceed. of the Royal Med. and Chir. Society, June 25, 1861.*)

The whole of the facts recently made out with regard to syphilitic inoculation have not hitherto been collected into a condensed and separate form. The most ordinary kind of syphilitic inoculation is that which commences immediately upon the application of the poison, and is characterised by the suppurative form of inflammation. But that which is of so much importance, as far as the patient's constitution is concerned, has usually a period of incubation of some weeks' duration. This form of disease commences as a pimple, a crack, or an abrasion, and is accompanied by the adhesive form of inflammation. The first of these forms of disease is usually, but not always, developed upon a part which retains much of its natural softness and pliability. The second is generally, but not always, developed upon a part which becomes indurated in a very peculiar and characteristic manner. In cases where the sensation failed to furnish a means of diagnosis, the secretion of the sores examined

under the microscope would enable a surgeon to distinguish between the two diseases. (See previous article.)

Mr. Lee pointed out in the year 1856, that the adhesive form of primary syphilitic inflammation did not furnish a secretion, which, as a rule, could be again inoculated upon the same person. These facts, although now generally acknowledged, had been received in a very slow and guarded manner by the profession. Thus, as late as the year 1858, a most eminent authority on the Continent said that the description of one of these varieties of disease, as regarded its inoculation and mode of development, would apply almost equally well to the other.

Besides the adhesive and suppurative actions as the result of syphilitic inoculation, the author noticed two other forms of disease—that which is accompanied by lymphatic absorption, and that which is accompanied by mortification; but at the same time he states that the observations which follow apply only to the adhesive and the suppurative forms of primary specific inflammation.

Although, as a rule, the inoculation of the secretion from an indurated sore would produce no effect upon the same person, yet, under certain circumstances of increased action or irritation, some result would follow; but that result would be in a very modified form, and would not resemble the effect which would be produced by the inoculation of the same secretion upon a person who had not previously had the disease.

In contrast to the effects of the inoculation of the secretion produced by the adhesive inflammation, were those produced by the inoculation of the discharge from naturally suppurating sores. These were highly contagious, although the sores themselves did not infect the patients' constitutions. Inoculations from suppurating sores might be repeated a great number of times, either upon the same or upon another person; but inasmuch as they did not produce constitutional syphilis, it was a misnomer to call this proceeding, however often repeated, "syphylisation."

In unmixed cases, the inoculation of the secretion would furnish an additional test of the nature of the disease. If the sore were of the naturally suppurating kind, the specific pustule would be produced by the inoculation of its secretion upon the same patient. If the sore were of the indurated and infecting class, inoculation in the same way would be followed by no result. In the one case, the patient's constitution would not be infected; in the other, some form of secondary symptoms would develop itself.

A case is then given where the tests by the microscopic characters of the secretion, and by inoculation, had corrected the impression given by the sense of touch. There were, however, cases where neither the sense of touch, nor the nature of the secretion, nor the result of inoculation, would give positive information as to whether the patient would have secondary symptoms or not. These were the *mixed* cases, in which a twofold inoculation had taken place. They occurred for the most part in patients who had never suffered from constitutional syphilis.

Twofold inoculation might occur either on the same or on a different part, at the same or at different times. When it occurred on the same part, and at the same time, the results of the suppurative action would first develop themselves, and subsequently those of the adhesive action. This depended upon the different periods of incubation which naturally

belonged respectively to each kind of disease. If the inoculation of the suppurating form of disease occurred after the inoculation of the adhesive, then the results of both might be developed simultaneously, and under these particular circumstances it became extremely difficult to form an accurate diagnosis of the nature of the case. The suppurative action would not prevent the infection of the patient's constitution; the adhesive action would not prevent the appearance of the "specific pustule" upon inoculation. A well-marked case of double contagion, accompanied by a local suppurating sore, and followed by secondary symptoms, is related.

The different results obtained by inoculation had been ascribed to the differences of individual constitutions. But that these different results depended more upon the kind of secretion used is proved by inoculating different forms of disease upon the same patient at the same time.

The case of a patient is described, who, under very peculiar circumstances, was inoculated with the secretion of four different kinds of syphilitic sores at the same time. The results were different in all the four series of inoculations, and in some of these the differences were marked in the strongest possible way. The secretions made use of were—1, that from a primary indurated chancre; 2, that from an inflamed and suppurating secondary mucous tubercle; 3, that from a primary mixed form of inflammation; 4, that from the patient's own most intractable and irritable serpiginous sores.

In the first case very slight results of any kind were produced, and the inoculations failed altogether after the series second in order.

In the second case more effect was produced, but these also failed after the series third in order.

In the third case the specific pustule was produced through eight series of inoculations, and might have been continued.

In the fourth case the sores produced were so extremely irritable and painful that the inoculations on that account were not continued beyond the series third in order.

This patient's own serpiginous sores had continued open more or less during a period of six years; and it was remarked that this long period of continued self-inoculation had not rendered him insusceptible of further inoculation, either from a suppurating sore or from the more virulent poison secreted by his own ulcers. As two kinds of syphilitic action might be inoculated at the same time, so might some of the syphilitic virus be inoculated with some other kinds of animal poison. Practically, by far the most interesting question here presented was, whether syphilis could be communicated in the practice of vaccination. An analysis of the opinions of 539 members of the medical profession, as collected by Mr. Simon, is then given. At the time these observations were made, and the opinions of these gentlemen recorded, it was generally believed that the infecting variety of syphilis had not a longer period of incubation than the suppurating kind. The results were consequently in general watched during the first eight days only, and anything that happened subsequently to that period was attributed to some other cause. With the additional knowledge now obtained regarding the natural periods of incubation of the two kinds of syphilitic disease, it is evident

that a fresh series of observations must be made before the question could be considered as settled by the general experience of medical men. Aided by these recent investigations, Dr. Viennois had collected together a considerable number of cases in which vaccination has been followed by the primary specific adhesive inflammation, and this in its turn had been succeeded by secondary symptoms. An abstract of the cases in which syphilis has thus been communicated by vaccination collected by Dr. Viennois is then given.

The conclusions arrived at in respect to the various points contained in the paper are principally :

1. The primary specific adhesive inflammation might be communicated to a person who had not previously had syphilis, either by a primary or by secondary syphilitic affection.

2. The infecting and non-infecting varieties of syphilis might be recognised by their respective periods of incubation, by the kind of inflammation by which they were accompanied, by the nature of the secretion produced, and by the results of inoculation.

3. The infecting and non-infecting varieties of the disease might be inoculated upon the same part at the same or at different times.

4. In like manner the cow-pox and syphilis *might* be inoculated at one and the same time ; and, when such a twofold inoculation occurred, each disease developed itself at the expiration of its natural period of incubation.

5. The simultaneous inoculation of two poisons in such an instance was analogous to the inoculation at the same time of the adhesive and suppurative forms of syphilitic disease.

6. The vaccine lymph was not capable of communicating syphilis, but its presence did not prevent the secretion from a secondary syphilitic sore, or the blood of a syphilitic patient, when inoculated, from producing their natural results.

ART. 82.—*Is Inherited Syphilis protective against subsequent contagion ?*

By MR. JONATHAN HUTCHINSON, Assistant-Surgeon to the London Hospital, &c.

(*British Medical Journal*, Sept. 21, 1862.)

It is now generally admitted that a man who has once had an indurated chancre, and the usual rôle of secondary symptoms, is not susceptible of a subsequent contagion. In this respect, as in many others, true syphilis resembles the exanthems. The latter, however, although they protect the individual, do not protect his offspring, unless, possibly, in those cases where a pregnant woman is the patient. Now, syphilis chiefly differs from those diseases usually classed as exanthems in that all its stages are very protracted. Time is thus afforded for the offspring to suffer as well as the parent. It becomes, therefore, a very interesting question as to how far an inherited taint is protective against subsequent contagion. No attempt has yet been made to find an answer to it, and in the hope of drawing attention to the matter, Mr. Hutchinson records the following three cases. They are the only facts bearing upon it which have as yet come under his notice, although he has been carefully seeking such for some years.

CASE 1.—*Heredito-syphilis with clear history; gonorrhœa and superficial sores; no secondary symptoms.*—Richard D—, a lad, æt. 19, had been under my observation for several years on account of nodes, keratitis, &c., the results of inherited taint. His mother was also under treatment for tertiary symptoms, and gave me a clear history. The boy had suffered severely in infancy. At length (1858), he one day applied at the hospital on account of gonorrhœa and superficial sores, with much swelling of the prepuce. None of the sores became indurated. He was treated solely by local remedies; and no secondary symptoms occurred. He was under my care at the Metropolitan Free Hospital. I have frequently seen him during the last two years, and am certain that he has not had any constitutional symptoms.

CASE 2.—*Heredito-syphilis; acquired syphilis; several non-indurated sores with suppurated bubo; no constitutional symptoms.*—Edwin W—, æt. 20, came under my care at the London Hospital in 1859, on account of primary sores. There was a large ulcer which had destroyed the frænum, and several small circular ones on the surface of the glans, and on the roll of the prepuce close to the corona. None of the sores were indurated. In the right groin was an ulcerated bubo with livid undermined edges. He had had the sores for nearly two months, and had taken mercury. There were no constitutional symptoms. The interest of his case belonged to the circumstance that he was evidently the subject of inherited taint in a severe form. He had suffered from interstitial keratitis in both eyes, and both corneæ were still hazy. The right iris was adherent at its pupillary edge, and this eye had, he said, been defective from infancy. The keratitis occurred when he was ten years old. His teeth presented the typical malformation; his nose was flattened, and large radiating cicatrices extended from the angles of his mouth. He stated that he was the oldest living in his family. A sister who was older died of consumption at the age of twenty-one; she had always been ailing, and had suffered for long from "bad eyes." A brother a year younger than himself is now the subject of "bad eyes," and under care at Moorfields. I had this patient under observation for several weeks, during which he got nearly well of the local disease. No constitutional symptoms occurred.

CASE 3.—*Heredito-syphilitic diathesis well marked; primary syphilis acquired at adult age; mercurial treatment; no constitutional symptoms.*—In the following case the patient, besides being the subject of inherited syphilis, had also suffered from the acquired disease. It did not appear, however, that he had had any true constitutional symptoms from the latter; and the history made it clear that the attacks of inflammation of the eyes were dependent upon the inherited taint, rather than the acquired one. As he was not under my care during the primary disease, I am unable to state the exact nature of the sore.

William B—, æt. 26, was admitted under my care at Moorfields early in the present year. His aspect, teeth, &c., were most characteristic. The bridge of his nose was flattened down, and had been so since boyhood. There were large fissures running from the angles of his mouth. The face was pitted; the upper incisors narrow and notched. His sight had been imperfect since early boyhood; the first inflammation, his mother told him, being at the age of four years. With the right eye he had never been able to see much.

The right cornea was hazy; the iris dull; and the pupil much notched by adhesions. The other eye had been the better one until the attack of inflammation, for which he came under my care; but in this, too, there had always been a corneal haze. He had, when I saw him, an acute ulcer on the outer part of the eye, attended by hypopyon. Under atropine the right pupil

dilated widely, but with some notches; the other also dilated well. It was not practicable to illuminate his fundus at all well. The vitreous body appeared to contain floating films; and there were large and numerous black dots on the choroid.

The history of his acquired syphilis was as follows. Five years ago he attended the Lock Hospital for two months. He had then "clap and chancres," "a bubo formed and broke." After this, and during his attendance, he had a rash on one leg. He took pills night and morning for a month or two, and was salivated. After ceasing to attend he had no further symptoms. Two years ago he had gonorrhœa again, and was salivated by a chemist. He subsequently married; and his first child was born a few months before he came under my care. I was very anxious to see his infant, but my curiosity did not seem agreeable to him; and I could not press the matter. I have as yet had but few opportunities of seeing the offspring of heredito-syphilitic patients.

It will be seen that in none of these cases did the patients suffer from constitutional symptoms. In none is there any proof that the sores were of the indurated type, and in the first two it is certain they were not. As far as they go, they favour the belief that hereditary syphilis, if severe, is protective against subsequent contagion, and that its subjects are not liable to contract the indurated form of chancre.

(B) CONCERNING INJURIES AND DISEASES OF VESSELS.

ART. 83.—*The Statistics of Amputation.*

By Mr. TEALE, Surgeon to the Leeds General Infirmary.

(*Medical Times and Gazette*, July 6, 1861.)

These statistics refer to the amputations performed at the Leeds General Infirmary during the eight years preceding 1861. The operations were all performed by Mr. Teale, Mr. S. Smith, and Mr. S. Hey. Amputations at the joints are not included.

All the Amputations performed at the Leeds General Infirmary from January 1, 1853, to January 1, 1861.

	PATHOLOGICAL.			EXPEDIENCY.			PRIMARY.			SECONDARY.			TOTAL.			
	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Total.	Cured.	Died.	Per cent. and average.
THIGH . .	27	6	18-18, or 1 in 5-5	2	1	33-3, or 1 in 3	2	5	71-4, or 1 in 1-4	—	6	—	49	31	18	36-7, or 1 in 2-7
LEG . . .	50	7	12-2, or 1 in 8-1	1	1	50, or 1 in 2	10	3	23, or 1 in 4-3	—	2	—	74	61	13	17-5, or 1 in 5-7
ARM . . .	4	2	33-3, or 1 in 3	—	—	—	17	9	34-6, or 1 in 2-8	1	1	50, or 1 in 2	34	22	12	33-3, or 1 in 2-8
FOREARM .	9	—	—	—	—	—	16	1	5-9, or 1 in 17	5	1	16-6, or 1 in 6	32	30	2	6-2, or 1 in 1-6
	90	15	14-3 or 1 in 7	3	2	40, or 1 in 2-5	45	18	28-5, or 1 in 3-5	6	10	62-5, or 1 in 1-6	189	144	45	23-8, or 1 in 4-2

The unusually large mortality of amputations of the arm, Mr. Teale says, is explained by the fact that of 34 amputations of the arm 28 were traumatic, having generally resulted from severe accidents by machinery, often attended with serious injuries of other parts of the body.

The *causes of death* in the 45 fatal cases were as follows:—pyæmia, 24; secondary hæmorrhage, 4; exhaustion, 4; shock 4; other causes, 5; causes of death not recorded, 4.

Comparison of rectangular with other amputations.—Mr. Teale gives the following tables illustrative of this:

Amputations by other methods than the Rectangular.

	PATHOLOGICAL.			EXPEDIENCY.			PRIMARY.			SECONDARY.			TOTAL.			
	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Total.	Cured.	Died.	Per cent. and average.
THIGH . . .	6	1	14·28, or 1 in 7	—	—	—	1	5	83·3, or 1 in 8·2	—	1	—	14	7	7	50, or 1 in 2
LEG . . .	20	3	13, or 1 in 7·6	—	1	—	1	3	27·2, or 1 in 3·6	—	2	—	37	28	9	24·3, or 1 in 4·1
ARM . . .	1	1	50, or 1 in 2	—	—	—	11	7	38·8, or 1 in 2·6	—	—	—	20	12	8	40, or 1 in 2·5
FOREARM . .	4	—	—	—	—	—	8	1	11, or 1 in 9	1	1	50, or 1 in 2	15	13	2	13·3, or 1 in 7·5
	31	5	13·9, or 1 in 7·21	—	1	—	28	16	36·3, or 1 in 2·7	1	4	80, or 1 in 1·25	86	60	26	30·2, or 1 in 3·3

In these 86 amputations by other methods than the rectangular there were 26 deaths, a mortality of 30·2 per cent. In 103 rectangular operations there were 19 deaths, a mortality of 18·4 per cent.

If we subdivide these two groups the following results are obtained:

Of the 86 amputations by other methods than the rectangular, 37 were pathological with 6 deaths, a mortality of 16·2 per cent. Of 103 rectangular amputations, 7·3 were pathological, of which 11 died, a mortality of 15 per cent.

Of the 86 amputations by other methods than the rectangular, 49 were traumatic with 20 deaths, a mortality of 40·8 per cent. Of 30 rectangular traumatic amputations 8 died, or 26·6 per cent.

Remarks.—On reviewing the foregoing statements additional confirmation is obtained of a fact already well established, that traumatic amputations are much more fatal than pathological; the rate of mortality at Leeds in the traumatic being 35·4 per cent., in the pathological 15·4 per cent.

Rectangular Amputations.

	PATHOLOGICAL.			EXPEDIENCY.			PRIMARY.			SECONDARY.			TOTAL.			
	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Cured.	Died.	Per cent.	Total.	Cured.	Died.	Per cent. and average.
THIGH . .	21	5	19·2, or 1 in 5·2	2	1	33·3, or 1 in 3	1	—	—	—	5	—	35	24	11	31·4, or 1 in 3·18
LEG . . .	30	4	11·7, or 1 in 8·5	1	—	—	2	—	—	—	—	—	37	33	4	10·8, or 1 in 9·2
ARM . . .	3	1	25, or 1 in 4	—	—	—	6	2	25, or 1 in 4	1	1	50, or 1 in 2	14	10	4	28·5, or 1 in 3·5
FOREARM .	5	—	—	—	—	—	8	—	—	4	—	—	17	17	—	—
	59	10	14·5, or 1 in 6·9	3	1	25, or 1 in 4	17	2	10·5 or 1 in 9·5	5	6	54·5, or 1 in 1·8	103	84	19	18·4, or 1 in 5·4

In the traumatic cases the secondary proved much more fatal than the primary; the rate of mortality of the secondary being 62·5 per cent., of the primary 28·5 per cent.

On comparing the mortality of rectangular with that of other amputations, the advantage is here shown to be obviously on the side of the rectangular, although the general results in this respect are scarcely equal to those obtained in the earlier of these operations.

"The more favorable results which have hitherto attended the rectangular method," says Mr. Teale, "I am inclined to attribute chiefly to two causes; first, to the more complete covering of the end of the bone secured by this method; and secondly, to the avoidance of irritation and distress in the subsequent treatment; the repeated liftings of the stump, the strappings, and the circular bandagings, usually required in other amputations to prevent the retraction of the soft structures, being unnecessary in the rectangular.

"In hospitals, when erysipelas and pyæmia are prevailing, stumps frequently 'open out,' suppurate, or become phagedenic. But when rectangular stumps are thus affected, and life is preserved, the resulting stump is, with very rare exceptions, a good one. In several cases, apparently most unpromising, although the stump has lain long without showing a disposition towards repair, yet when recovery was at length accomplished, there was a soft movable mass of tissues over the end of the bone, almost as satisfactory as in the cases which had done well from the beginning.

"After ordinary amputations it is admitted by surgeons of great experience that exfoliation and necrosis are *frequent*. After rectangular amputations they are *rare*. After 103 of these operations, in two cases only, and to a very small extent, have exfoliation or necrosis come under the knowledge of my colleagues or myself."

ART. 84.—*On the treatment of Deformities resulting from severe Burns.*
By Mr. JOHN K. BARTON, Surgeon to the Adelaide Hospital, Dublin.

(*Dublin Quarterly Journal of Medical Science*, Aug., 1861.)

"Whatever mode of treatment we adopt," says Mr. Barton, "our great object must be to obtain, if possible, the absorption of the lymph, which is the contracting power; if this be removed, the case is cured. Now no cutting operation will, of itself, produce this desirable object, on the contrary, it will cause the effusion of more lymph, which being quite recent, will, no doubt, be far more amenable to extension than the old cartilaginous lymph, and so cutting may help. But the means which we must trust to, to gain the removal of the cicatrized tissue is *extension*; and this, in some cases alone, in others aided by the knife, will, when perseveringly employed, produce the absorption of the tissues of the cicatrix, and the permanent removal of the deformities dependent upon it."

Mr. Barton relates several cases in illustration of the successful result of this mode of treatment.

ART. 85.—*On the treatment of Abscesses by Drainage.* By Dr. ROSER.

(*Archiv der Heilkunde*, vol. ii, 1861; and *Med.-Chir. Rev.*, Oct., 1861.)

In this paper Professor Roser, of Marburg, protests against the indiscriminate resort to Chassaignac's "drainage" treatment of abscess, believing that it is often employed when unnecessary or even mischievous; and taxing its author with greatly exaggerating the easy execution and advantages of the practice. The following are his chief conclusions:—1. There are various circumstances which impede the healing of abscesses, besides obstacles to the free exit of their discharge. Among these is rigidity of the walls of the abscess, which not only impedes the issue of the discharge, but also the subsequent contraction of the new tissue. The cutting through the walls expedites matters, and this is one of the reasons of the success which attends the slitting up of fistulous passages. Local atrophy with anæmia, too, offers a remarkable obstacle to healing in undermined portions of the skin, as is seen in glandular abscesses of the neck. On the other hand, hyperæmia has always to be moderated in order to produce sound healing. 2. Drainage is not suitable in acute abscess, as coagula of blood or fibrin, or portions of dead tissue, have to be removed. 3. The same objection applies to cold or congestive abscesses, which naturally contain albuminous precipitates which will often obstruct the tubes. In small abscesses it is not worth while to introduce the tubes, while in sinuous and subcutaneous fistulous passages incision or excision of the skin is the proper treatment. There is, in fact, only a small number of deep-lying abscesses of the breast, abdomen, pelvis, &c., to which the tubes are applicable. And here it is very questionable whether the better practice is not to enlarge the aperture by means of a probe-pointed bistoury, or the daily introduction of a dilator. 4. In certain abscesses of the neck, thorax, mamma, axilla, anal region, &c., a valvular mecha-

nism impedes the discharge, and this may be remedied by the introduction of the tubes. But even here this need be only exceptional, as the end will be better brought about by incision or dilatation. The drainage tubes are, indeed, not without their inconveniences, requiring preliminary enlargement of narrow fistulous openings for their application, being difficult to fix in some places, as near the anus, and sometimes stimulating the walls of the abscess too much. The time for their removal is not always easily decided. If they remain too long, they retard the healing, and if they are removed too soon, the external aperture prematurely closes. 5. The drainage tubes serve the purpose of conveying the discharge away better than do setons; but their application leads to the unnecessary multiplication of counter-openings. These are, in fact, only indicated when they may prevent the further penetration of the discharge, and facilitate its escape. 6. The drainage tubes may be used in preference to other means when a large opening is not practicable, or is not on anatomical grounds advisable.

ART. 86.—*New form of Suture for Wounds of the Intestines.*

By Dr. P. W. ELLSWORTH, Hartford, Connecticut.

(*Philadelphia Medical Reporter*; *Dublin Medical Press*, July 3, 1861.)

"The desideratum in this case," says Dr. Ellsworth, "is to bring serous surfaces together, and have the thread quickly and certainly drop into the bowel, instead of the peritoneal cavity. The following is my method: A threaded needle is thrust *entirely* through from without inward as close as possible to the edge of the cut at one end of the wound; then from within outward a line further back from the edge; then it is thrust through by the side of this last puncture, and at the same distance from the edge, but further along the cut. The needle is now brought forward a half line from (or close to) the edge of the wound by the side of the thread going through the first puncture. Thus the needle has passed four times through one side of the wound. Now it is carried over to the opposite side, and the same is done there, only reversing the order—viz., through the edge, opposite the last puncture, and from without inward; then a line back of this from within outward; then by the side of this, only toward the end of the wound, where the stitch commenced, and penetrating from without inward; then back from within outward close to the edge. Thus the needle goes through four times on this side, and leaves the ends of the thread close to the edge, opposite each other, and hanging outward. When the wound is drawn *moderately* together, the edges must be turned a little inward by a probe, and ends of the thread tied; the knot is to be thrust by the forceps down into the fissure between the sides of the wound, and will be invisible. Nothing can be seen but a small portion of thread, according to the length of stitch, pulling opposite to a corresponding portion, and, of course, drawing inwardly toward the cavity of the bowel. In two hours these threads will be coated with lymph, and no effusion can possibly occur when the threads cut through toward the cavity of the intestine, as they certainly will do. Thus the wound is as favorably situated for union as a cut on the skin. Each stitch must be independent, and the

same process must be gone through with each. The suture may be coarse or fine, according to the portion injured or the wish of the operator.

"It may be difficult to understand this at first, but I recommend persons to follow the description with a needle and thread on a roll of paper. The practical application to a wound will be found easier and will take but little longer time than Guthrie's stitch. When completed, nothing is left to be desired, as the junction is almost invisible if properly made, and in two hours would be completely so. I resorted to this method a few days since on a person shot through the abdomen, near the umbilicus, with a charge of small shot. I was abundantly satisfied with the suture and ease of application, though the individual died an hour or two afterwards, owing to other complications."

(C) CONCERNING OPERATIONS.

ART. 57.—*New operation for the radical cure of Varicose Veins.*

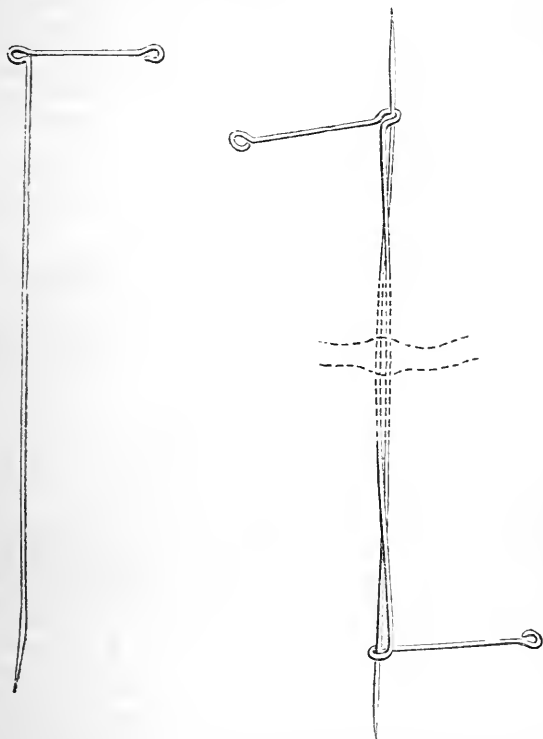
By Mr. WOOD, Assistant-Surgeon to King's College Hospital.

(*Medical Times and Gazette*, Oct. 12, 1861.)

This operation consists in the application of a pair of needles, invented by Mr. Wood for this purpose. The needles, of the thickness of an ordinary harelip pin, are bent at right angles, about an inch from the head, forming, at the bend, a loop for the reception of the point of the fellow needle. The head, or blunt extremity, is also formed into a loop to serve for the purpose of retention by a strip of lint or plaster. The point of one needle is straight and spear-shaped, as in the harelip pin; that of its fellow is curved as in the ordinary surgical needle for sewing up a wound.

The method of application is as follows:—The skin over the vein being pinched up and raised from the vein by the finger and thumb; the straight needle is passed close under the skin, between it and the vein. The finger and thumb are then adjusted so as to raise the vein from the fascia a little on one side of the needle. The curved needle is then passed through the same punctures in the skin as the former one, but in an opposite direction and under the vein, which is thus included between the needles. The needles are then locked on to each other by passing the points of each through the loop at the bend of the other. The punctures are then protected from pressure by the interposition of a piece of lint or wash-leather, and the needles pushed in so that the loops are close to, but do not press upon the punctures. The points of the needles are then cut off with pliers. The bent head of one needle is then turned upon its fellow until it lies on the limb in the same direction. This will be found to twist the shafts across each other in such a manner as to compress laterally the included vein, and at the same time slightly to twist it. The needles are then held firm in their places by a strip of lint twisted figure-of-eight-wise, and a strap or two of sticking-plaster, care being taken to prevent all chafing. They are left in a week or ten days, until so much effusion has taken place as permanently to obstruct the current in the vein, and by progressive absorp-

tion from *acupressure on both sides* to cause complete obliteration. In many cases treated by Mr. Wood in this manner, there has been no supuration whatever in the track of the needles, when care has been taken to prevent chafing or irritation. A drop or two of serum, forming a sugar-like crust, is the only discharge.



The curved needle.

This represents the two needles *in situ*. The vein is represented by dotted lines as passing between them. The needles are also seen to be twisted upon one another.

This plan, remarks Mr. Wood, possesses the advantages of being almost entirely free from pain (the skin not being included in the pressure); of giving rise to no irritation or supuration, which is invariably the case, he says, when apparatus is used which presses into the punctures, or includes the skin, or requires subsequent twisting or tightening. It has also the advantage of a complete, equable and constant lateral and linear acupressure without movement or disturbance; and so is ensured an obliterating action on the vein, proceeding equally from

the two sides. By this means, he adds, the patient is insured against the danger of putrid matters or pus getting into the circulation through the vein operated on.

In the ordinary method of passing one needle under the vein and a twisted thread or wire over the skin, it will be seen that the acupressure is on one side only, the soft tissue of the fascia, fat, and skin, being the resisting force on the other. The effect is similar to that of pressing with a stick upon a soft cushion. The coats of the vein are absorbed on one side only, and when half cut through the current may be established on the other side of the needle, and the operation fail from this cause or purulent matter pass into the half-opened vein.

ART. 88.—*Case of Aneurismal Varix following the use of pressure in the treatment of an Aneurism.* By Mr. O. PEMBERTON, Surgeon to the Birmingham General Hospital.

(*Proceedings of Royal Med. and Chir. Soc., June 11, 1861.*)

CASE.—The patient, an old soldier, was fifty years of age, and had, about ten weeks before coming under Mr. Pemberton's notice, perceived the symptoms of an aneurismal swelling in the calf of the right leg. This was afterwards found to be an aneurism of the upper part of the posterior tibial artery. A month after his admission into the hospital, the aneurism was treated by pressure—applied, first, to the femoral artery on the pubic arch, for three weeks; and secondly, to the femoral artery just below Poupart's ligament, above the origin of the profunda—for a period of nine months. At the end of ten months from the date of his admission he was discharged, the aneurism of the posterior tibial artery being quite cured, and no inconvenience having been experienced from the pressure beyond œdema of the limb from time to time. There was, however, some thickening at the spot where the pressure had been for so long a time applied. The patient resumed his employment, and for ten months continued well, when suddenly all the symptoms of a communication between artery and vein, at the seat of pressure, manifested themselves; again he was admitted into the Birmingham General Hospital. On examination there was no doubt of the existence of a permanent communication between the femoral artery and vein, corresponding in situation to the seat of pressure. The patient died, without leaving the hospital again, eighteen months from the time when the secondary disease first appeared. During the progress of the arterio-venous disease sloughing sores formed in the leg, below the seat of communication. These, however, finally healed, and the immediate cause of his death appeared to be effusion into the pleural and peritoneal cavities, consequent on disease of the heart. The duration of the case was as follows in its various stages:—1. The aneurism of the posterior tibial lasted from its first appearance to its cure thirteen months. 2. He remained well for ten months. 3. The arterio-venous disease, from its commencement to termination, eighteen months. 4. The duration of the case, from its commencement to its termination, forty-one months. In the dissection, the arterio-venous disease was found to be that variety termed aneurismal varix. The right femoral artery and vein communicated by a large, distinct opening in the former vessel; whilst the vein was dilated and varicose, so as to have expanded itself into a sacculated covering for the greater portion of the artery in which the aperture had been

established. There was no arterial aneurism, but the femoral artery was dilated at and above the aneurismal varix. The author of the paper attributed the formation of the arterio-venous communication to the effects arising from the long-continued pressure on the femoral artery and vein, the disease having arisen exactly in the spot where the pressure was made use of for nine months, with the view of curing the aneurism in the posterior tibial. The mode in which this was induced seemed to be, that the femoral vein became varicose from the pressure, causing obstruction to the return of the blood, and subsequently adhered intimately to the artery. Afterwards the communication was established between the two vessels owing to the pressure of the varix on the one hand, and to the action of the blood on diseased arterial coats on the other.

ART. 89.—*On the treatment of Erectile Tumours by Vaccination.*
By M. NÉLATON.

(*Journ. de Méd. et de Chir. Prat.*, May, 1861.)

In a clinical lecture lately delivered in the Hospital of the School of Medicine at Paris, after saying that vaccination as a remedy for certain forms of erectile tumours does not deserve the discredit into which it has fallen, M. Nélaton spoke as follows :

"It is obvious that no beneficial result will be attained, if the same procedure is here adopted as for common vaccinal inoculation. A certain amount of blood escapes, the hæmorrhage is checked, a second and a third puncture are made in the neighbourhood of the first, &c.; but at each puncture blood flows, carrying off the virus, and covers the parts, a few pustules being the result, separated by intervals of textures which undergo no subsequent modification in consequence of the operation.

"The escape of blood must here most carefully be guarded against.

"For this purpose, M. Nélaton uses entomological pins or very fine needles, and vaccination is performed not with preserved virus, but from a pustule. A pin bearing vaccine matter is inserted into the tumour, to a depth not exceeding two lines, and serves as an obturator to the wound. The same system is followed for the other punctures, which the operator deems necessary, their number of course being proportionate to the extent of the surface in which the surgeon wishes to induce structural change, and calculated in accordance with the known diameter of vaccinal pustules. Thus, in order that the required effects be produced, it is requisite that the areolæ of the pustules should overlap each other so as to leave no intervening islets. According, therefore to the peculiarities of each case, the insertion of 7, 8, 10, 15, 20, or even 30 pins may be necessary; they should not be removed for three or four minutes. If these precautions are attended to, the operation will assuredly prove successful.

"This procedure is sufficient for a nævus, but would fail to produce any beneficial effect on a thicker or subcutaneous tumour. In this instance it becomes necessary to establish channels within the erectile mass, and to deposit the virus within the depth of the growth. In the case of a little girl, an enormous erectile tumour existed in the parotidian region, and M. Nélaton operated as follows: The growth was

traversed by six filiform setons, four of which were inserted horizontally and two in a vertical direction. The threads were allowed to remain *in situ* for a week, so as to establish suppurating sinuses, from which no blood was discharged. The vaccinal fluid was then introduced by means of threads impregnated with virus, and before their insertion, the surgeon resorted to a precautionary measure which we must describe. Each thread was placed within a very slender lachrymal canula, as a protection, not only to the thread, but to the apertures of the sinuses through which it was necessary it should enter. Had this little contrivance not been resorted to, the virus would have been retained and would have accumulated at the entrance of the sinuses, where useless pustules would have been evolved, and unsightly scars must have been the result. After an interval of four days, the usual period of incubation, the morbid mass became considerably tumefied, the threads were withdrawn, the tumour gradually collapsed, and it was soon ascertained that the erectile portion of the growth had entirely disappeared.

"These tumours are not always of a simple character. M. Nélaton has shown that, in addition to their vascular elements, they are sometimes constituted by glandular hypertrophy, as in the case we have just related in which marked enlargement of the parotid existed, and that they occasionally obtain adipose or muscular structures. MM. Nélaton, Velpeau, and Denonvilliers have met with a certain number of such complex vascular growths, which the former professor denominates *Composite erectile tumours*.

"With regard to the treatment of nævi and other vascular swellings by the process of vaccination, M. Nélaton laid down with precision the indications and counter-indications of the treatment.

"Caustics, said he, are not applicable in all regions. In the mouth, in the nostrils, for instance, it is extremely difficult to resort to the use of escharotics, and it is in these cases, of course if the patient has not been previously vaccinated, that the method under consideration may be considered to possess a peculiar degree of utility.

"M. Nélaton, in illustration, related the case of an infant aged three months, who bore an erectile tumour in the posterior part of the septum of the nose. The growth extended somewhat over the lip and seemed perfectly simple, but on further examination it was found to penetrate on either side into the nostrils, and to involve the entire sub-mucous texture. In this instance, caustics would have been inappropriate, and it was resolved to try the effects of vaccination. He inserted four or five pins into the cutaneous part of the tumour and a far more considerable number of needles into the nostrils. An abundant eruption followed, and induced, as he expected, the obliteration of the vascular net-work.

"The privilege enjoyed by vaccination to modify the textures without destroying them, should induce the surgeon to prefer this method for the cure of certain erectile tumours of the lids, in which it is all important to avoid the formation of ectropium.

"With regard to the other parts of the face and neck, which in general remain exposed, the surgeon should be guided, in his choice of an operative procedure, by the extent and thickness of the growth. A small tumour of one or two lines in diameter does not, for instance, justify vaccination, because the pustule would be followed by a much too

visible scar, of greater extent than the original disease. M. Nélaton prefers, in such cases, using a very pointed stick of Filhos's caustic (potassa cum calce). With this escharotic he merely touches the centre of the speck, the eschar spreads half a line beyond the spot touched by the caustic, and the consequent eschar being very thin, the cicatrix is all but invisible.

"When the vascular growth is larger, and occupies the entire depth of the skin, and penetrates even into the subcutaneous cellular layer, vaccination is appropriate. M. Nélaton resolved upon adopting this method in the case of a little child who bore on the lip a congenital, cutaneous erectile tumour, encroaching somewhat on the mucous membrane; it is of a purple colour and its increase in size is rapid. Here, as in one of the instances above recorded, a glandular, muscular or adipose substratum exists, and as in this sort of composite tumour several morbid elements enter into combination, *interstitial* vaccination may be adopted not only with equal, but often with chances of success superior to those afforded by any other procedure. Thus in vascular growths, complicated by hypertrophy of the parotid, it is an important point to avoid injury of the numerous ramifications of the facial nerve, which can be scarcely expected when escharotics or the actual cautery are employed, whereas vaccination modifies the vascular tissue without offending the nervous filaments. In the child we have alluded to, M. Nélaton, for a moment, felt some anxiety, on account of the tumefaction which followed the operation, and the pressure occasioned even some degree of paralysis; but this proved only a transitory symptom. A complete cure has been effected, and no permanent diminution of local sensation remains."

SECT. II.—SPECIAL QUESTIONS IN SURGERY.

(A) CONCERNING THE HEAD AND NECK.

ART. 90.—*On Diphtheritic Ophthalmia.* By Dr. WARLOMONT.

(*Annales d'Oculistique*, vol. xlv, 1861; and *Med-Chir. Rev.*, July, 1861.)

Dr. Warlomont relates a case of this affection which, as far as he is aware, is the first which has occurred in Belgium, in order to contribute to that collection of facts which can alone reconcile the discrepancy of opinion entertained concerning even the reality of the disease; for while Graefe signalises it as a special and almost endemic affection, other practitioners, no less worthy of confidence, with Mackenzie at their head, deny its very existence, regarding it as a mere symptom of ophthalmitis.

A custom-house officer, aged thirty, applied at the Brabant Ophthalmic Institution, on account of an affection of the eyes of a week's duration. The eyelids were red, swollen, and gorged with fluid, but admitted of eversion without difficulty or much pain, their inner surfaces exhibiting great engorgement, numerous distended vessels, small ecchymoses, and some thick muco-purulent secretion attached to the palpebral conjunctivæ;

opposite the edges of the eyelids were stripes of firm, fibrinous, non-vascular false membrane, the detachment of which caused great pain and bleeding, and left a rough, unequal surface beneath. This membrane could not be better compared than with the plastic exudations in croup. Between the external angle and the cornea of each eye was a similar patch of firm exudations; the cornea being otherwise in a normal state. Chlorate of potass and a borax lotion were ordered, and in a day or two the false membranes began to disappear. But while the eyes were thus improving, diphtheritic exudations appeared on the lips and lining membrane of the mouth, covering with large plates the internal surface of the lips, gums, and velum, and rendering the voice hoarse and deglutition difficult. Eventually the patient did well.

In a subsequent paper, M. Warlomont gives an account of three cases which had been observed by M. Legros in the Belgian army, prior to the occurrence of his own case. The first of these presented itself accompanied by such acute symptoms that it was deemed to be a gonorrheal ophthalmia, and was vigorously treated by bleeding, calomel, &c. When the true nature of the disease was discovered, cauterization was resorted to, but its progress was not arrested and the eye was lost. One of the other soldiers was the subject of catarrhal ophthalmia, and the other of granular ophthalmia, prior to the diphtheritic exudation appearing; and both of them had occupied beds adjoining that of the first patient. The last two patients were successfully treated by frequent cauterization with nitrate of silver, cold applications to the eye, salivation being also induced by calomel. It is upon the cauterizations M. Legros lays greatest stress.

In M. Warlomont's opinion, pseudo-membranous conjunctivitis, or rather, the false membranes with which the palpebral conjunctiva is liable to become lined, may present different characters, and be dependent upon very different morbid conditions. The cases hitherto published seem to offer no other analogy than the presence of a newly-formed membrane; the symptoms accompanying it, the development, characters, progress, and stages of the disease being absolutely various. As long as the diagnosis of these various conditions is not rigorously exact, no uniform therapeutical agent can be recommended as a special agent for all these cases.

In a subsequent number of the 'Annales' (January, 1861), a translation is given of a thesis upon this disease as witnessed at the Clinic of Dr. Jacobson, of Königsberg. Its author, Dr. Lewinski, observes that whatever doubt may exist elsewhere, none can prevail in that town (in which diphtheritis may be said almost to be endemic) as to the reality of diphtheritic ophthalmia. In this thesis he details twelve cases, observed during an epidemic which occurred in the spring of 1860 (which has been described by Jacobson himself in the sixth volume of Graefe's 'Archiv'), and was attended with great devastation, many eyes being lost by perforation of the cornea; a pre-existing conjunctivitis usually acting as a predisposing cause.

ART. 91.—*On Diabetic Cataract.* By M. LECORCHÉ.

(Archiv. Gen. de Méd., May, June, July, 1861.)

After an elaborate history of the affection, in which several new cases are related, M. Lecorché concludes as follows ;

1. No doubt can prevail as to the existence of diabetic cataract. Its frequency, course, and development completely characterise it and constitute it as a well-defined morbid individuality. 2. It is soft or partially soft, its hardness being quite exceptional, and dependent upon circumstances as yet unknown. 3. It may be preceded by amblyopia, or by various forms of nervous affection ; but it may also manifest itself without any precursory sign. 4. It is not met with in slight cases of diabetes, but forms a portion of the symptomatology of the grave form of the disease. 5. It only appears at an advanced stage of this, and justifies the prognosis of certain and more or less approaching death. 6. Unconnected with the changes undergone by the fluids of the eye (as saturation of the aqueous humour with sugar, its acidity, &c.), it may be regarded as one of the manifestations of a deep-seated deterioration of the economy, dependent doubtless upon the impoverishment of the nutrient fluids. 7. It requires for its removal a special mode of operating.

ART. 92.—*On Syphilitic Blotch of the Conjunctiva.*

By Mr. FRANCE, Ophthalmic Surgeon to Guy's Hospital.

(Guy's Hospital Reports, 3d series, vol. vii, 1861.)

This peculiar manifestation of syphilis has not hitherto, the author believes, been noticed by writers either on ophthalmology or lues. It must be extremely rare, as sixteen years have elapsed between the occurrence of the first and third examples recognised at Guy's.

This form of disease presents itself as a limited and well-defined discoloration of the mucous membrane of the globe, which within the affected area is slightly thickened and raised, but not conspicuously, if at all, more vascular than the neighbouring surface. There does not seem to be any disposition to ulceration, as when the margin of the lid is attacked with syphilis ; there is no pain, and no morbid discharge. The appearance is quite distinct from that produced by chemical agents, as solution of nitrate of silver. Discoloration from this cause is always most concentrated at the reflection of the conjunctiva from the lid to the globe, whence it extends equably in both directions, and is gradually, and indeed imperceptibly, lost, if (as commonly happens) the entire expanse is not implicated. The tint also, familiar to all ophthalmic surgeons, is that of a dingy-blackish stain, with a shade of green. In all these points the characters of the affection under notice are, as above described, quite different.

After the foregoing remarks were written, Mr. France discovered in the pages of the old 'London Medical Gazette'* a case related by Mr. Smee, which undoubtedly entitles him to the credit of priority in the observation of syphilitic blotch of the conjunctiva. He has, nevertheless, preserved the above as originally penned, because it exhibits a perfectly

independent picture of the complaint as drawn from personal observation; it will be seen how far the two descriptions correspond.

Mr. Smee's patient, a respectable married female, had had syphilitic ulceration of the lid, and cutaneous eruptions, previously to becoming the subject of the complaint under consideration. "The conjunctiva below the cornea presented a spot a little smaller than a silver penny. This spot appeared formed by the conjunctiva itself at that point being swollen; in fact, the surface was obviously raised, and the colour changed to that of a cupreous hue, somewhat similar to the colour of the spots of the skin, but considerably lighter. This spot was not absolutely opaque, but semi-transparent; and it gave the idea that the conjunctiva at that point was swollen in its substance, and tinged of a copper colour. It presented no unusual vascularity; in fact, I do not know that I should be justified in asserting that there was a single vessel either increased in size or added in number to those existing in the normal state. The copper colour, then, had no immediate reference to the vessels, and was due to the part exhibiting the syphilitic stain, a phenomenon by no means understood. . . . As far as I know, there is no record of specific eruption attacking the conjunctiva, [this being] the first case of the kind which has been narrated."

Desmarres in his large experience has never met with this affection, as he states in a passage which gave me the clue to the case just quoted;—"Je n'ai jamais eu occasion d'observer de plaques muqueuses, ni, comme M. A. Smee, d'éruptions cuivrées sur la conjonctive oculo-palpébrale;"*—nor is it figured in the illustrated works of Ructe, Dalrymple, Sichel, or Demours.

The duration of syphilitic blotch of the conjunctiva, if unremedied, would seem very protracted, as the third case beneath tends to show; while the first and third and Mr. Smee's examples sufficiently prove its ready curability by appropriate means. Those adopted with success were such as constitute the ordinary routine in the treatment of secondary syphilis, viz., small alterative doses of mercury, assisted by iodide of potassium and a mild tonic.

CASE 1 was that of a young woman, who presented herself at Guy's, among the ophthalmic out-patients, in 1844. There was no doubt of the specific nature of the affection, the final proof of which was afforded by its convalescence under the usual treatment.

CASE 2 occurred more recently in a man. In addition to the conjunctival blotch, the patient had a syphilitic eruption of the tubercular kind upon the face.

CASE 3 was one of inherited syphilis, and is subjoined in extenso, mainly as drawn up by Mr. Edwin Lloyd, dresser in the Eye Infirmary at the time it occurred. William Flynn, æt. 3, was admitted as out-patient in February, 1860. The mother, living at Onley Terrace, Camberwell, stated that he had always been very delicate, and about three weeks after birth was covered by an eruption, which her medical attendant gave her to understand was of a specific character. It disappeared under treatment in about a month's time. She stated also that, soon after the eruption had vanished, the child suffered from great intolerance of light, which was soon followed by a sanguineo-purulent discharge from both eyes. A month afterwards the eyes were in a

convalescent state, and rapidly got well. About eighteen months before applying at Guy's, the skin of his whole body (including the limbs and face) was again covered by an eruption; and, eleven months after, the mother took him to the Skin Disease Hospital, Blackfriars Road, where she was told that the eruption was syphilitic. Here he was under treatment as an out-patient for six months, at the expiration of which time he was once more cured. The child was eventually brought to Guy's Hospital, as an out-patient under the care of Mr. France, with an affection of the eyes, which the mother affirmed he had had for the last two years and four months. It consisted of partial and abruptly defined discoloration and thickening of the conjunctiva on each side. The left eye was most extensively involved; but the right presented the change in the most characteristic degree, from the contrast afforded by the healthy portion of the membrane. The tint of the discoloured parts was a dull copperish hue. There was no other venereal symptom present at the time; but Mr. France recognising the local disease as syphilitic, made inquiries, from which the preceding history was ultimately elicited. Under small doses of mercury and iodide of potassium the conjunctival blotches on both sides slowly but progressively faded, and had all but entirely disappeared when the mother, probably satisfied with the convalescence, discontinued attendance at the hospital.

ART. 93.—*Cases of temporary Paralysis of the Ciliary Muscle of the Eye.*

By MR. GEORGE LAWSON, Clinical Assistant to the Royal London Ophthalmic Hospital, Moorfields.

(*Medical Times and Gazette*, May 11, 1861.)

The following cases are given by Mr. Lawson as examples of partial or entire paralysis of the ciliary muscle of the eye, but we question whether they will be looked upon by ophthalmologists as altogether conclusive. "I call," says Mr. Lawson, "this affection paralysis of the ciliary muscle; for the accommodation of the eye being performed through this agency, any sudden loss of the power of adjusting the eye for near objects occurring in an eye which has always had normal vision must depend on some impairment in the function of this muscle, which may be either partially or entirely paralysed. From the few cases which have fallen under my observation, this ailment appears generally to come on either during a severe illness, or else, as is more frequently the case, it is first discovered by the patient during the period of convalescence, when, on attempting to read, he finds that the lines appear misty, and that he is unable to distinguish the words.

"The symptoms are those of a total or almost complete loss of the power of accommodation in the eye. The patient is unable to focus his eye for near objects, and surrounding bodies appear indistinct. In one of the cases I have related, the patient could see well objects at a certain distance, could read at twenty-six feet the markings on the clock—in fact, she was able to appreciate those objects which were far enough off to allow the parallel rays proceeding from them to form a focus on her retina without any effort of adjustment of her own; while at the same time she could not clearly distinguish near objects or read large ordinary type. She could only make out with difficulty the letters of words in Canon type, the size known as No. 18 in the test type used at the Moorfields Ophthalmic

Hospital. In each case, with a slightly convex glass, the patient was able to read clearly moderate-sized print at its focal distance. The lens rendered the object clear without magnifying it. The prognosis may, I think, be favorable; for in each of the four following cases a speedy recovery to good vision followed the treatment, which consisted in resting the eyes (not allowing them to attempt reading), the free use of iron, quinine, and purgatives, and cold sponging and splashing the body.

"It is difficult to assign a true cause for this affection, or to suggest what pathological state produces it. This palsy of the ciliary muscle is analogous to the partial or entire paralysis which frequently attacks certain muscles or sets of muscles, especially those of the lower extremity, thus allowing a preponderance of action to their opponents, and producing some of the forms of the non-congenital varus and valgus. Why certain muscles should after a long or a depressing illness become paralysed, while others in the same limb remain unaffected, it is difficult, if not impossible, to say; but the fact is well known, although we cannot comprehend in what manner such a result is effected."

CASE 1.—June, 1855.—A. B—, æt. 26, an officer who had suffered severely from fever and dysentery in the Crimea, consequent on the necessary exposure and bad living during the winter months of that campaign. At the time I now allude to, he was in a very feeble state, the result of his illness; his legs were œdematous, and there was some fluid in his belly; he had great muscular debility, and was incapable of walking even a few yards. One day he noticed accidentally that on attempting to read, the lines were cloudy and the letters indistinct, and that he was unable to continue reading for more than a few minutes. Day by day the symptoms increased, until at about the expiration of a week he could not make out a word of any ordinarily printed book. There were, however, objects at a certain distance which he was able to see, but at what distance I cannot say. At his own suggestion, he was permitted to try a pair of spectacles, with moderately convex glasses, and he then found that at their focal distance he could read well. Deriving much benefit from the glasses, he wore them for about a fortnight or three weeks, when his sight began to improve, and was in a short time as good as ever. He has never since been troubled with any similar affection.

CASE 2.—Feb. 4th, 1860.—Fanny P—, æt. 9. Has always had good health, with the exception of scarlet fever five years ago. She has continued well until one month since, when she had what her mother calls diphtheria, her throat being very sore and her breathing very difficult. Before this attack her sight had been always good, and she had learnt to read and write well. She now complains of indistinctness of vision and an inability to read any of her books. She can read Double Pica print, known as No. 14 of the Moorfields test type, but she is unable to distinguish smaller letters. With a twenty-inch focus convex glass she can read with facility, and all surrounding objects appear much clearer to her. She was treated with iron, purgatives, and cold sponging, and the report states, on March 8th—She can now read the smallest Brilliant, or No. 1 type.

CASE 3.—September 4th, 1860.—Sarah H—, æt. 12, six weeks ago had an acute attack of urticaria, which lasted a week, during which time she was very ill. Her appetite was very bad, and she became much exhausted. A fortnight or three weeks ago she complained that near objects appeared muddy, but that distant ones were clear. She had previously had good sight, and had learnt to read and write. She is now unable to read or to follow her

school duties. With either eye she can only make out the letters of Canon type, or No. 18 of the Moorfields test-type; but she is able to see the clock and tell the time at a distance of twenty-six feet. Her sight is much improved by a 28-inch focus convex glass, and with it she is enabled to read No. 10, or Pica type. She was ordered a powder of calomel and scammony at bed-time, steel medicine twice a day, to sponge the body daily with cold water, and rest the eye. She gradually improved, and, on October 2nd, she could read Brilliant type, or No. 1, with either eye.

CASE 4.—September 11th, 1860.—Thomas F—, æt. 10, a fair, delicate boy, who has suffered from measles, whooping-cough, and smallpox, from all of which he has made a fair recovery; but his mother says he has never regained his former healthy appearance, and that for the last year, although he has had no decided illness, yet for several months previous to his eyes becoming affected, he had been much troubled with frequent attacks of sickness and headache. Up to within the last three months he has always had good sight, and has learnt to read. He was accustomed to much reading; but about three months ago he says that he found one day while reading that the print became dizzy, and that he was unable to discern the words. His sight became rapidly worse, and he was shortly unable to read at all. With either eye he can only make out the words of four-line condensed type, or No. 19 of the Moorfields test-type; but he can see the clock and tell the time at the distance of twenty-six feet. With a 16-inch focus convex glass he can read No. 8, or Small Pica type. This patient was treated in the same manner as the others—with preparations of iron, purgatives, cold sponging, and complete rest for the eye.

30th.—He can now read No. 1, or Brilliant type, with the greatest ease.

December 1st, 1860.—He is now at work, and his mother states his sight continues very good.

ART. 94.—*On the rectification of Divergent Strabismus by the use of Prismatic Glasses.* By M. GIRAUD-TEULON.

(*Journ. de Méd. et Chir. pratiq.*, Sept., 1861.)

An eye affected with squinting, as our readers are aware, seldom takes any share in binocular vision; when it contributes to this function, it is but in a very limited degree, and only provided the divergency is moderate. In general the deviating eye has separate sensations, and the healthy eye alone is used by the patient.

If, under these circumstances, the image of objects seen by the healthy eye be placed before the inert organ with the assistance of a prismatic glass of an angle proportionate to the degree of the squint, both eyes will be in possession of two similar images, at the intersection of the ocular axes, and coalescence of the two figures, and subsequent visual perception of a single object will be the result.

Both eyes are thus artificially brought into a simultaneous action; but for restoration of the regularity of the ocular axis nothing yet has been done. Now, if instead of the prism above described, the angle of which (at the summit) would be about double the angle of deviation of the eye, a prism is used of a slightly smaller angle, inferior for instance by two or three degrees to that of the deviation, each organ still receives the impression of the object, but not precisely at the same focus. The

images are seen double, but in close approximation, crossed if the strabismus is divergent, superposed if internal.

. In accordance with Wheatstone's law of binocular perspective, the tendency of the patient is to exert himself continually to neutralize the diplopia, and as, on account of the angle of the prism, the images are very close to each other, the instinctive effort overcomes their separation; they soon blend, and as this result is due to the agency of the muscles of the divergent eye, a part however small of the deviation is thus corrected.

When the diseased eye has, by uninterrupted exercise of a certain duration, say about a week, gained a little in the right direction, another prism of a smaller angle is used, and the eye is for another week compelled to fresh exertion, and, after a short time, binocular association is gradually restored.

On these principles, M. Giraud-Teulon, formerly a pupil of the Polytechnic School, and the author of a recent treatise on the physiology and functional pathology of binocular vision, rests his treatment of squinting.

CASE.—On the 24th of April of the present year, a young lady, æt. 17, was presented by M. Demarquay to M. Giraud-Teulon, as an instance of strabismus resulting more probably from functional than from anatomical disease. The right eye, in which existed some slight corneal opacity, was considerably divergent; the outer edge of the cornea being in contact with the external canthus, in more than twenty degrees' deviation. *No muscular retraction* was present, but some slight spasmodic movements were observed, and the eye-ball moved freely from one side of the orbit to the other. In the healthy eye the visual function was perfect, but the other was decidedly myopic. Thus, in order to read with this eye alone, the patient was obliged to use a biconcave glass, No. 14;* and to read without effort, with both eyes together, the divergent eye required the assistance of a prism (with its summit turned outwards), of eighteen or twenty degrees.

From these data, M. Giraud-Teulon concluded that the great disparity in vision between the two organs was the cause of squinting, and ordered the patient to wear glasses constructed as follows: before the left eye a plane glass No. 0, and before the right a biconcave glass No. 14, in contact by its external surface with a prism measuring at its summit (turned outward) fourteen degrees.

The treatment was instituted May 4th.

Every eight or ten days, the angle of the prism was reduced by about two degrees, and the axis of the eye restored in a corresponding amount to its natural direction. A singular circumstance was then observed: in proportion as the divergency decreased, and as binocular vision was accomplished with weaker glasses, the patient complained that the sight of the sound eye was becoming shorter. M. Giraud-Teulon then measured the range of vision in this eye, used singly, and found it what it was at the beginning of the treatment; he again measured it, both eyes acting together, and to his surprise discovered that the originally healthy eye had become myopic in binocular association. He then resumed the treatment, substituting for the plane glass of the left eye a biconcave glass No. 14, as on the other side, and after two months' perseverance, binocular vision was restored, natural as to direction, but myopic on both sides. Towards the 15th

* French Scale.

of July, the patient was even compelled to exchange her glasses for biconcave spectacles No. 12, and all further artificial rectification by means of prisms was abandoned. All that could be expected in this case was thus attained, and the patient must persevere in the use of the common lenses used by myopic persons, with the assistance of which she is enabled to perform all the duties of life.

ART. 95.—*Case of primary Schirrus of the Eyeball.* ¹
By Mr. BUTCHER, Surgeon to Mercer's Hospital, &c.

(*Dublin Quarterly Journal of Med. Science*, Feb., 1861)

This case appears to be a well-marked example of this exceedingly rare affection.

CASE.—A woman, æt. 69, was admitted into Mercer's Hospital, on the 1st of November, 1859, with a tumour, of a circular shape, and about the size of a two-shilling piece, projecting between the lids of the left eye. Its surface was mammilated, and made up of a dense fleshy-coloured structure, which, to the touch, was as hard as cartilage, and pressure did not give rise to pain or hæmorrhage. A thin watery secretion flowed abundantly from the eye on each side of the growth, and it was the seat of lancinating pain. She was also the subject of severe hemicrania, which was aggravated during the night. Her previous history was that, two years before her admission, she was awakened by a racking pain in the eye, which remained unabated for days, and gradually the sight became dim. For about three months she could discern objects, but the vision was finally lost. Two months later "a red, fleshy pimple" appeared on the cornea, which slowly increased to the size above mentioned.

On careful examination the tumour was found to arise from the cornea and its conjunctival membrane, without implicating the surrounding parts. On the 11th of November the eye was extirpated, and the case treated in the usual manner. On the 5th of the following month, when she left the hospital, her condition had greatly changed; her appetite was restored, her nights were undisturbed, and she rapidly gained flesh and strength. A careful microscopic investigation of the growth proved it to be of a true scirrhus nature. All the structures, and the whole thickness of the cornea, were matrixed in the abnormal growth. The globe of the eye posterior to its encroachment was not altered in volume; the optic nerve was healthy, as were the sclerotic, and other coats of the organ; the posterior chamber was not encroached upon; the lens lay in its natural situation, while the iris was resting against, but not adherent to it; the anterior chamber was obliterated, in consequence of the cornea being forced backward by the tumour. Every adherent or approximating tissue, as the areolar and muscular, and the lachrymal gland, were subjected to the most searching examination, but were all exempt from contamination.

In commenting upon this remarkable case, Mr. Butcher suggests the following points relative to the operation: 1. On all accounts, it is better to place the patient recumbent, and leaned a little toward the affected side, so that chloroform may be administered to the best advantage, and the safety of the patient; and that the blood may readily escape, and not interfere with the after proceedings of the operation. 2. That the lachrymal gland should be taken away in all instances, when the op-

ration is for cancer, or when an artificial eye is not applicable, so that no undue secretions may be produced, streaming forever over the cheek, the delicate lachrymal puncta being probably obstructed, spoiled in their functions, by the resulting inflammation set up by the injured parts; this objection to its being left being altogether apart from its liability to secondary affection. 3. It is of great importance to the sufferer that no disfiguring traces should remain, by the lids being apart, as so frequently occurs, with a rather prominent, red, fleshy protrusion from within; or if not projecting, at least appearing sufficiently repulsive within the space.

When an artificial eye cannot be applied, it is necessary to protect the delicate and sensitive parts within from extraneous matters and from sharp winds, and also to secure a placid expression of countenance, free from any trace of deformity. Mr. Butcher suggests for adoption the method of managing the lids pursued in the foregoing case, namely, after separating them by section at the outer canthus, and after the several steps of the operation to the removal of the organ, not bringing the divided surfaces in contact by adhesive strips or stitches, but permitting the upper lid to slightly overlap the lower, by a little more than the depth of its tarsal cartilage; if, as the wound heals, the drooping should threaten to be too great, then the lid may be slightly elevated, which can be readily effected by gently drawing it outward, and maintaining it at the required tension, either by strap or stitch. Sometimes the lid, if redundant, will be inclined to fall inward; this, too, may be prevented by the insertion of a stitch judiciously placed outside, so as to make a little tense the lid, and, at the same time, give it the least possible tendency to eversion of its tarsal edge; when the wound heals this will not be found too great.

ART. 96.—*On the treatment of Lachrymal Tumours.* By Mr. TAVIGNOT.

(*Journal de Méd. et Chir. prat.*, May, 1861.)

This paper, which was read before the Institute, treats of the comparative results of the treatment of lachrymal tumour by the complete destruction of the sacculus, and by the separate obliteration of the lachrymal ducts. The too frequent insufficiency of the various operations proposed up to the present time for the cure of the lachrymal fistula and tumour seems to justify artificial interruption of all contact of the tears with the sac, which the latter has become manifestly incapable of bearing. This interruption may be effected by two different methods:

By the destruction of the receptacle of tears;

Or by the obliteration of the ducts which feed it.

M. Tavignot expresses his opinion on the two procedures thus:

"The destruction of the lachrymal sac with the actual cautery or with escharotics is an operation not without some gravity, and may give rise to serious complications. It is, moreover, unsatisfactory in its results, either from the insufficiency of the cauterization, or from the subsequent formation of a rudimentary sac in the cicatricial textures; a repetition of the operation, if assented to by the patient, presents much difficulty, because the remedial action cannot be limited to the exact spot in which relapse

has taken place. The obliteration of the ducts is then the only appropriate procedure, and to this method I have several times resorted with success, as a last resource, after the failure of Nannoni's procedure.

"The obliteration of the anterior portion of the lachrymal ducts is an operation much more simple than the former, and of far less doubtful efficacy. Palpebral excision and galvanic cauterization are the two procedures of the method; for the last six years I have had frequent recourse to both, in order to estimate their comparative value, which I may briefly state as follows: excision does not always succeed at once, and often requires to be performed twice or three times, on the same lid, before obliteration can be effected; galvanic cauterization, on the contrary, has always been followed by immediate success. I should further add that it is of easier performance and less painful than excision, although the latter causes but little suffering."

ART. 97.—*A rare instance of Conservative Surgery.* By Mr. NICHOLS.

(*Lancet*, Aug. 24, 1861.)

The length of time that parts separated from the body retain their vitality, and their capability of reuniting with those from which they have been separated, is not correctly appreciated either by the profession or the public; but that it is much longer than is generally supposed the following case will show.

CASE.—In the summer of 1846 (I was then living in Leicester place) a servant drove up to my door in a street cabriolet—she had come from Wellington-street, Strand—and requested me to return with her to see her master, a gentleman of more than seventy years of age, who had fallen down and seriously injured himself. Anticipating some occasion for strapping, lint, &c., I stayed long enough to provide myself with them, and then returned with her as quickly as the crowded state of the thoroughfares would permit. On arriving at the house I was hurried up to the drawing room, where I was met by my patient, who, holding a handkerchief to his face, said, "Doctor, I have cut my nose off." I was at the moment rather incredulous, but his daughter soon removed all doubt as to the nature and extent of the injury by showing me the separated portion, which she had picked up from the floor. It was black, cold, and covered with grit and dirt. On examining the wound, I found that the whole of the fleshy end of the nose, together with the alæ and septum, were clean cut away, and the white end of the cartilage exposed. The upper lip was divided transversely throughout its whole extent, and hung down over the mouth. It appeared that this gentleman, on going upstairs, had stumbled near the upper step, and, trying to recover himself, had fallen forwards against a wooden flap placed at the drawing-room door, the sharp edge of which had come in contact with his nose, first compressing it and then separating it from the face.

For a moment I hesitated what to do, but thinking the separated part would be as good a dressing as any other to the exposed surface, and that the patient's hope (though I had none) of its reunion would give time for him to reconcile himself to its ultimate loss, I determined on readjusting it. This was easily enough done. The grit was washed from it, and, being carefully replaced, it was retained *in situ* by adhesive straps. The edges of the wound of the lip were brought together, and kept so by similar means.

On calling the next day, I observed that the end of the nose—which I had purposely left exposed—had lost the deep-black colour that it had when replaced, and bore evident signs of circulation going on in it. There was no discharge from the wound. On the next day, appearances were the same; and on the third, the dressings were removed, when I was as much astonished as gratified to find that union had taken place throughout the whole extent, and the scar that was left was scarcely perceptible. The lip had also united.

Now the time that had elapsed between the separation and the readjustment of the divided parts could not have been less than three quarters of an hour—an important fact, the knowledge of which cannot be, in my opinion, too widely disseminated; and when I reflect on the numerous cases of mutilation, the result often of drunken violence, that appear at our police-courts, in which no effort is made at restoration, I take some blame to myself for not having published the case before. The late Dr. Addison was called in to see some member of this family, and I showed the case to him. He examined the course of the cicatrix very carefully, and observed, "You ought to publish the case."

ART. 98.—*On a peculiar form of severe Deafness, depending upon a Lesion of the Internal Ear.* By (1) M. MÉMÈRE, and (2) Dr. BROWN-SÉQUARD.

(*Comptes Rendus*, Jan. 8, 1861; and *Gaz. Hébdom. de Méd. et Chir.*, Jan. 25, 1861.)

(1.) The conclusions at which M. Mémère arrives are these:

1. An auditory apparatus, up to a certain time perfectly sound, may suddenly become the seat of functional disorders, consisting in noises of a variable character, either continuous or intermittent, and these noises are accompanied by more or less diminution of the sense of hearing.

2. These functional derangements, having their seat in the internal ear, may give rise to complications which may be attributed to cerebral disorders, such as vertigo, bewilderment, uncertain gait, giddiness, and falling; and they may, in addition, be accompanied by nausea, by vomiting, and by a syncopal condition.

3. These complications, which assume an intermittent form, are soon followed by deafness, increasing in intensity; and the hearing is even frequently suddenly and completely extinguished.

4. Everything which has hitherto been ascertained respecting this form of disease leads to the belief that the material lesion which is the cause of these functional derangements is situated in the semicircular canals.

(2.) M. Mémère's paper calls forth a note from Dr. Brown-Séquard on the production of cerebral symptoms as a consequence of injuries to the auditory nerve. In this note the writer says:

"I. I have found that in the batrachia the slightest wound of the auditory nerve suffices to produce the following phenomena:

"1st. A peculiar state of the anterior limb of the opposite side; the member being almost constantly held in contraction, owing to contraction of some of its muscles and paralysis of others.

"2nd. A marked degree of hyperæsthesia of the skin. These phenomena last during the life of the animal.

"Section of the semicircular canals in the batrachia does not produce any of these phenomena unless the auditory nerve has been injured. This

nerve, contrary to the views of Müller and Magendie, that some nerves of special sensation are devoid of sensibility, is almost as sensitive in batrachia as the fifth pair.

"II. Pricking or section of the auditory nerve in mammals is followed at once by rotatory movements such as follow injuries of the middle peduncle of the cerebellum. The sensibility of the same side of the body is also notably increased by the operation. In the rare cases which survive this operation, a slight paralysis of the side of the body operated on is apt to remain, and rotatory movements are easily reproduced by very slight excitants.

"III. Pathological facts observed by R. Bright, by Walter Lincke, Burggrave, and more recently by Hinton, show the influence of lesions of the auditory nerve within the internal ear upon the encephalon. Convulsions, vertigo, and rotatory movements have been observed in cases where the brain was so healthy that it was only possible to regard the phenomena as sympathetic or reflex, and as excited by the lesions of the nerve of hearing.

"From these pathological results, from my own experiments, from the effects of a cold injection thrown into the ear, and from the remarkable effects produced by sudden sounds on all nervous or feeble persons, I conclude that the auditory nerve has the power to produce, by reflex agencies, convulsions, vertigo, and other symptoms of disturbed cephalic functions."

ART. 99.—*On the employment of Pressure in the treatment of Cleft-palate.*
By Dr. REEVES, of Melbourne.

(*Medical Record of Australia*, June 15, 1861.)

"I was first," says Dr. Reeves, "led to try this mode of treatment on the dead body of a child, which had died three weeks after birth. The fissure was longitudinal, and large enough to admit the extremity of the little finger; fissure of the lip also existed. By means of a pair of clamps, the sides of the fissure were brought readily in contact, without any fracture or displacement of the bones; the only fault was that the gums of the upper jaw were within those of the lower; but nature would modify this as the living child grew up; the use of pressure on the lower jaw would remove a great deal of this deformity; of course the amount of deformity would depend on the size of the fissure in the palate. I several times repeated the experiments on young dogs, removing a piece of the palate bone by means of Hey's saw, and then applying the pressure. The animals did well.

"The operation should be performed as early as possible after birth, when the bones are in their softest condition. The following is the plan which I would suggest:—The edges of the fissure having been pared, the superior maxillary bones should be embraced by a horse-shoe-shaped clamp, with a shelf on its lower border to receive the gums and prevent it slipping. It should be padded with Indian rubber, or some other material to prevent the germs of the teeth being injured. The clamp should work on a joint, and possess arms. It may be said to resemble a large pair of pincers with horse-shoe-shaped blades. A screw may be

attached at the extremities of the handles, for the purpose of bringing the blades in contact, or the hands may be used; the former would be, I think, preferable, as the force could be applied gradually, and not be likely to be carried too far. It may also be employed in grown-up children, when the bones are so widely separated as to render it difficult to get soft parts enough to close the opening, but in a gradual manner and at intervals, more or less prolonged, according to the amount of pain it excites. If it were used suddenly it might produce inflammation, and subsequently abscess, which would prove troublesome to treat. From the foregoing it will be, I hope, understood that the younger the child the safer the operation is likely to prove, and that even in grown-up children it may be adopted, with precaution, with decided benefit.

"The pads, and the ledge to rest the teeth upon, should be made to slide in the sides of the clamp; the former, that the pressure may be directed on any part of the bones; the latter, that the edges of the teeth may rest on it, without the pressure being directed either too high or too low, but at the point where the palate bone joins the superior maxillary."

ART. 100.—*A new operation for Cleft-palate.*

By M. LANGENBECK.

(*Medical Times and Gazette*, July 20, 1861.)

At a recent meeting of the Medical Society of Berlin, Professor Langenbeck exhibited and explained a case upon which he had performed this operation with the most satisfactory results.

CASE.—The patient, a boy, *æt.* 14, had been born with a cleft of the left lip and total cleft of the hard and soft palate together with the left alveolar process. The operation of hare-lip had been done soon after birth, but had failed; and a second operation made about a year afterwards, had been successful. On February 6th, M. Langenbeck united first the cleft of the soft palate by means of a needle-instrument especially invented by him for this purpose. On May 11th he closed the hard palate in the following manner: Close to the edges of the cleft, the mucous membrane and the periosteum of the hard palate were cut through to the bone by means of a strong knife, and the edges of the cleft freshed up. By means of a raspatorium placed into these incisions, the mucous membrane and the periosteum were then drawn off and separated by blunt levers from the two halves of the hard palate. Thus two flaps were formed which were only connected anteriorly with the gums at the alveolar process, and proceeded backwards into the soft palate which had been separated from the posterior margin of the os palatinum. The edges of these flaps were then united by five silken sutures in the median line, and thus the whole cleft, up to the front teeth completely covered up. This separation of the mucous membrane of the palate and of the periosteum is troublesome, but can be done without in any way injuring other parts. The hæmorrhage from the vessels of the periosteum necessitated repeated interruptions of the operation, which was, however, concluded in half an hour. After the sutures had been removed, which was done in the course of the second week, the cure by first intention was quite complete in the whole extent of the wound. The healed palate is only distinguished from a normal one by a fine cicatrix visible along its whole extent and a slight indentation

at the top of the uvula. In another case of total cleft, in a woman, æt. 24, who came under M. Langenbeck's care a fortnight afterwards, he performed staphyloraphy and uranoplastics in the same sitting, and with the best result.

ART. 101.—*Case of Recovery after a serious Wound of the Brain dividing the longitudinal sinus.* By Mr. GEORGE B. WILSON.

(*Amer. Med. Times*, Aug. 16, 1861.)

CASE.—On June 4th, 1859, I was called to see W. S—, cabinet-maker, æt. 22, wounded in the head by a circular saw. Found him in the shop where the accident occurred, sitting up without assistance. He was coughing frequently, and on my lifting a cloth thrown loosely over his head the blood at each expulsive effort of the cough spurted out from a saw-cut gash, some seven inches in length, extending across the front part of the head. He was a light-haired, blue-eyed person, of nervo-sanguine temperament, and light build. His surface was pale and cool, inclining to clamminess, pulse slow and weak. He was quite rational, but talking and breathing were much interfered with by his frequent dry hollow cough. I asked him if the cough had troubled him before the accident, and being answered in the negative, I dealt out about half a grain of acetate of morphine, and laid the powder on his tongue, directing him to swallow it as well as he could, there being no other way at hand for administering it.

On first coming into the shop I had dispatched a messenger for a buggy to convey him home, and now, after wrapping him in overcoats and such other parts of clothing as were at hand, while waiting for the buggy, I set about investigating the extent and cause of the wound. I had scarcely proposed a question, however, ere I observed that the cough had very much abated, and in a minute or two more it entirely ceased. It could not have been more than five minutes from the time I gave him the powder until the complete cessation of the cough, so that I am yet undecided as to whether the relief was owing to the medicine or not.

I now learned that the patient had gone under a small rapidly-revolving circular saw, and on suddenly raising his head brought it in contact with the teeth of the instrument, and on the instant had its edge buried in his brain. The whole affair was but the work of a moment. He had fallen at first, but immediately recovered himself and retained the use of all his faculties unimpaired. The wound corresponded in width with the set of the saw—a little over a quarter inch; in length it was slightly over seven inches, and extended from the superior temporal ridge of the left parietal bone, across the middle of the sagittal suture to within about an inch of the anterior tip of the right ear. The saw was only about fifteen inches in diameter, and as the convexity of it cut downwards into the brain, it must have severed the superior longitudinal sinus completely across, besides tearing through several branches of the meningeal artery of the right side.

The bleeding must have been profuse at first, for there were clots of blood on his neck, and in the folds of his shirt between his neck and shoulder of the side on which the wound was chiefly situated—the right side. It could not have lasted long, however, for I saw him in less than ten minutes after the accident, and all the bleeding then observable was the spurting and jetting out of the blood from the wound when he coughed. While the coughing continued, at each inspiration the cerebrum shrank down from the

skull, admitting the air under the dura mater, and then with each expulsive effort the air and blood bubbled out, the blood being thrown to a distance of several inches.

After the buggy arrived, he was able to help himself into it, and sat up till he was conveyed home, some ninety or one hundred rods. By that time my colleague Dr. Stockwell, had arrived, and soon after some other physicians. We cleansed the wound externally, and then with a *grooved director*, we endeavoured to scrape out the sawdust of the skull from the interior of the wound. The director was slipped in, gouge-like, at one extremity of the wound, and passed through the wound several times, carrying out with it considerable numbers of little crumbs of the sawed bone which were buried down into the cerebral substance. It was impossible to be certain of having got away all the foreign particles, but I endeavoured to scrape the bottom and edges of the wound pretty thoroughly. The external opening was then dressed by laying into it a long narrow strip of chamois skin, and leaving a small opening at its most dependent extremity, it was then covered with adhesive plaster and the patient put into a comfortable bed without much warmth, the coolness and tendency to clamminess of the surface having entirely passed away. The prognosis given by all present was unfavorable; and not knowing any treatment that would help him more than what was already done, I merely ordered him the half of a seidlitz powder, and directing him to lie on the right side, he was left till morning. He was closely watched for the first few days, but as everything went on favorably, no medicines were administered. The wound was dressed at intervals of from one to four days by myself and Dr. Stockwell, for six weeks, at the end of which time it was completely closed, and he felt quite well, not having had a single untoward symptom during the whole course—not even a slight temporary fever or pain. For some time before he was discharged he was directed to exercise himself in stooping, by bending slightly forward and remaining so for a short time before straightening up again, and gradually increasing his stooping from day to day, he improved until he could stoop over as far as he ever did without pain or inconvenience. His health after resuming his former duties was not so robust as before, but he had no sickness, and when I last heard from him he was feeling in every way quite well. This is one of the cases which is best treated by not doing too much, and which prompts us to ask—*Who will not get well if he be only let alone?*

ART. 102.—*Removal of a Ball by the Trephine twenty-two months after its penetration into the Cranium.* By M. JOBERT.

(*Comptes Rendus*, No. 6, 1861; and *Med.-Chir. Rev.*, April, 1861.)

CASE.—J. G—, æt. 21, was admitted into the Hôtel-Dieu, February 10th, 1857. Forming one of a force posted in front of the Malakoff tower, 8th April, 1855, he was struck by a ball in the forehead, the projectile, prior to penetrating the cranium, having come in contact with the external surface of the vizor, leaving a semilunar depression as it passed over the external edge of this. The man immediately fell from the parapet into the trench, a depth of seven feet, and remained unconscious in the ambulance for twenty-four hours. At the end of a week he was sent to the military hospital at Constantinople, where he stayed during four months. He then requested per-

mission to return to the Crimea, and did so, in spite of the suppuration, which had never ceased. He fought at Traktir, 16th August, 1855, and returning to Paris in December, he remained for six months longer in the regiment. He was, however, unfitted for active service, being obliged to pass a considerable time in hospital. The symptoms continued much the same from the first, and consisted in a sensation of heaviness of the head, an uncertainty in the attitudes, and a feeling, when stooping, as if the forehead were separating from the head, suppuration always persisting.

On his admission into the Hôtel Dieu, a clean, circular aperture, about the size of a franc, was observed in the centre of the forehead. Passing the finger around the circumference of the opening, "osseous granulations, partial ossifications formed by the periosteum," could be felt, and on the introduction of a probe to the bottom, a hard, resisting, metallic body was recognised. After a crucial incision had been made and the aperture caused by the ball was found not to be sufficiently large to admit of its extraction, a circle of bone was removed by means of the trephine. The ball was now extracted, and some indurated, blackish blood was removed. The movements of elevation and depression of the dura mater, isochronous with the pulse, were plainly perceptible. The projectile proved to be a leaden ball weighing twenty-five grammes (375 grains). Its surface was smooth and spherical over only a small portion of its extent, the remainder being rough and irregular. The details of the recovery need not be pursued, it sufficing to say that this was complete, the man as late as October, 1860, having been seen perfectly well.

M. Jobert calls attention to the fact of the ball having remained for so long a period in contact with the dura mater without inducing any inflammatory action. He also lays stress upon the circumstance of his having, after the completion of the operation, introduced the flaps formed by the crucial incision into the accidental opening. To this he attributes the non-occurrence of necrosis or osseous exfoliation usually observed after trephine operations when the parts are exposed to the air. Here, such exposure was prevented, immediate union of the raw flaps with the bleeding osseous surface being secured. The isochronous pulsations continued for a time visible, but they became more and more obscure as the tissues covering the aperture augmented in thickness.

ART. 103.—*Two cases of Wry-neck treated successfully by Electricity.*
By Dr. ALTHAUS.

(*Medical Times and Gazette*, May 25, 1861.)

CASE 1.—On the 21st of November, 1859, I was consulted by a lady, æt. 34, unmarried, who had for about eighteen months suffered from spasmodic contractions of the left trapezius and cleido-mastoid muscles. She observed the first symptoms after a violent emotion caused by witnessing an accident in the street. At first the contractions were slight, and only occurred when the patient was excited, when in society, or if suddenly spoken to. The affection gradually became stronger and more troublesome. In eating, when the spoon or fork was carried to the mouth, the head would always turn away. At the same time, a feeling of numbness, stiffness, and fatigue, was observed in the left side of the neck; but there was no pain,

unless the contractions were unusually violent. She was treated at first by blisters to the neck and purgatives, but did not experience any benefit from them. At a later period of her illness she consulted Dr. Todd, who prescribed the valerianate of zinc in two-grain doses twice a-day, and she thought she had observed a slight improvement after it; but as, after having taken it regularly for two months, she was still a severe sufferer from her complaint, by the advice of Dr. Todd she came to me to try a galvanic treatment.

On making an examination of the muscles of the neck, I found the left trapezius and cleido-mastoid strongly developed and somewhat rigid, especially the latter. The corresponding muscles on the right side did not show any signs of atrophy; but on applying the Faradic current to the two sets, the excitability of the fibres was greater on the left than on the right side, and the sensation excited by the application of the current was also more considerable on the left side. While I was examining the muscles, violent spasms occurred in the affected ones. The head was convulsively thrown towards the left side, and all the patient's endeavours to keep it straight were of no avail. I then immediately applied a strong current to the antagonistic muscles, and thereby succeeded in restoring the equilibrium between the two sets and in calming the spasmodic state of the skin, which I had formerly found to be of great benefit in hysterical convulsions.

The influence of emotion in exciting the trembling and spasms of the muscles was most striking in this case. The patient said that she suffered far less when she was alone and if the room was darkened; but if she thought herself observed, and the object of wonder or pity, she became much worse. She had, therefore, almost retired from society, and was only with difficulty induced to leave her rooms, from which she used to shut out the light. As eating was troublesome, she took as little food as possible, and in consequence of this, and the melancholic turn of mind caused by her affection, her general health had become impaired, and the catamenia were less abundant than they had formerly been.

The application of electricity was now continued, as above, for three days, when the catamenia appeared before the time and unusually abundant, so that the treatment had to be discontinued for a week. After that it was recommenced, and in a month's time the equilibrium between the two sets of muscles was so entirely re-established, that not a trace of the affection was observed, even when the patient was excited in any way. The general health also improved in consequence of the changed mode of life now adopted by the patient, and the courses again became normal.

CASE 2.—On the 4th of May I was consulted by a brewer from Hampshire, æt. 40, a strong, healthy man, who, with the exception of what he described as "bilious head-ache," from which he now and then suffered, had never been ill before the present affection came on. Three months ago he first noticed that his head was inclined to fall towards the left side. He was unable to assign any exact cause, but mentioned that shortly before he first felt ill, when driving, his horse fell and broke his neck, which gave him a great shock. He had also had much anxiety lately, and admitted having slept on a damp couch shortly before being attacked by the spasms. The latter affected the left side of the neck, and gradually became so much worse that he was constantly obliged to hold his head in the right position with the left hand, so that the latter became in a measure useless. He was no longer able to dress himself. His food was obliged to be cut for him, as he could not hold the knife and fork. He was also troubled at night, for if he attempted

to sleep on the side, as he was accustomed to do, his head would begin to tremble, so that he was obliged to lie straight on his back. He could then sleep well, and generally felt better in the morning than at other times of the day. The treatment at home consisted of laudanum, calomel, blisters, leeches, and cupping, but it had no beneficial effect whatever. He then came up to town to consult Dr. Lichtenberg, who prescribed a veratrine ointment to be applied to the nape of the neck, and sent him to me, that he might have electricity applied to the suffering part.

On examining the neck, the left trapezius and cleido-mastoid were found more strongly developed than the corresponding muscles of the right side, which were soft and flabby. On applying the Faradic current to them, I noticed the same phenomena as in the case first described, although in a more considerable degree. This case was altogether more one of purely muscular disease than one of an emotional kind, which was also evidenced by the circumstance that this patient was continually troubled, while the subject of the first case only suffered at intervals. I therefore had recourse chiefly to Faradisation of the suffering muscles, while Faradisation of the skin, although I did not entirely neglect it, did not form an important feature of the treatment.

Immediately after the first application, which lasted for ten minutes, the patient felt easier, and could hold his head straight for a short time without being obliged to support it with the hand. The improvement was now so rapid that after a few other applications of electricity in the way described the patient was no longer obliged to hold his head with the left hand, so that he could feed and dress himself again without aid. He also could again sleep on the side without being disturbed by trembling of the head. I was, therefore, hopeful of a perfect cure; but the patient, anxious about his business, felt so unhappy in London that he left town before he was quite cured, after having stayed here less than a week.

The two cases just described, to which others might be added, justify the conclusion that in spasmodic wry-neck electricity is a most valuable remedy, especially when applied in an early stage of the affection. As to the mode of applying it, I will only add that in cases in which the emotional nature of the complaint is strikingly apparent, Faradisation of the skin, which produces a powerful impression upon the nervous system, is preferable. If the influence of emotion is less marked, and the affected muscles are only slightly rigid, while the nutrition of the corresponding muscles of the other side of the neck is impaired, Faradisation of the latter ought to be performed, in order to restore the lost equilibrium. Finally, if there should be a marked rigidity of the spasmodic muscles, and the corresponding ones should seem normal, a continuous current of about twenty pairs of Daniell's or Bunsen's battery ought to be applied to the rigid muscles.

(B) CONCERNING THE TRUNK, ABDOMEN, AND PELVIS.

ART. 104.—*Mechanical treatment of Lateral Deviation of the Spine superseded.* By M. DUBREUIL, of Marseilles.

(*Journ. de Méd. et Chir. prat.*, May, 1861.)

As a fundamental fact on which his entire method is based, M.

Dubreuil endeavours to demonstrate that all lateral deviations of the spine are attended with torsion of the vertebral column on its axis. This deflexion is produced in a manner precisely similar to that which may be artificially caused in a thin piece of whalebone, or a flexible green twig, bent into the shape of an S.

If one of the extremities be forcibly twisted in one direction, the other will immediately become distorted in a contrary manner. This invariably happens for the vertebral column, the inferior torsion always being the converse of the superior deflexure, and if it were possible to untwist one end, the other would spontaneously return in the same proportion to its proper shape, exactly as in the case of the twig or whalebone. The spine presents more than two curvatures, the rotations in an opposite sense are always in equal number. That the intensity of the torsions is in exact proportion to that of curvatures is also a proposition capable of demonstration.

To destroy these torsions it is necessary to act in a direction contrary to that of the cause by which they have been induced. "Let us suppose," says M. Dubreuil, "a common spinal deformity in which the curvatures exist above on the right and below on the left side; the following are the movements I should recommend: I sit down and place the child standing with his back to me; I then cause him to stiffen his neck and left shoulder; while affording support with one hand to the child's right arm, and applying the other on his left hip, I prescribe a movement of the upper part of the body, tending to carry it to the left side and slightly backward, preventing at the same time all attempt to lower the shoulder or bend the trunk on the right hip. This movement, when properly performed, must cause rotation of the dorsal vertebræ to the left, and consequently a corresponding motion of equal extent of the lumbar vertebræ. During the movement, the thumb of my left hand lying over the first lumbar vertebra informs me of the degree of torsion of the spine, and whether the muscular action has been properly accomplished."

These exercises are continued for twenty or five and twenty minutes, with an interval of five or six minutes' rest, and need in general not be repeated oftener than five times a week. One *séance* a day is sufficient; indeed a greater number might be injurious, as improvement is less rapid when fatigue has been induced, and the various parts of the body then suffer a sort of collapse, which retards the cure. When the movements are performed in moderation, they induce neither pain nor fatigue, and contribute powerfully to the maintenance and amelioration of health. The children, in the day-time, are under no restraint whatever, and sleep at night in bed perfectly free from bandages or any other mechanical appliances.

M. Dubreuil, in support of his method, adduces thirty-three cases, the results of which may be summarised as follows:

Curvature (*Scoliosis*) in the first degree, as defined by M. Bouvier, is always curable in a space of time varying from two to six months, without any fear of relapse.

The second degree of the disease can always be perfectly cured in six or twelve months, provided the vertebræ are not altered in shape,

and if such deformation has occurred, very slight curvatures will remain, which will not injure the child.

As to the third degree, an amelioration, almost equivalent to a complete cure, may result from a treatment of twelve or eighteen months, in mild cases, and in very severe cases considerable improvement may be expected, which will much contribute to the restoration of health, and at least check the further progress of the disease.

ART. 105.—*On Disease of the Spine causing posterior angular Projection, Abscess and Paralysis.* By Mr. RICHARD HUGHES, Surgeon to the Brighton Orthopædic Hospital.

(*Pamphlet, Churchill, 1861, pp. 40.*)

Day by day, Mr. Hughes tells us, the conviction is more and more forced upon his mind, that the treatment ordinarily adopted in cases of this kind is utterly inadequate, and that the success of his own method is great and sure. As in the case of other diseased joints, the primary indication of treatment in 'Mr. Hughes's opinion' is to separate as far as possible the opposing diseased surfaces, and to preserve them at perfect rest in their separated position; and to carry out this indication, he discards the "crutch-support," and uses the apparatus invented by Mr. Amesbury,—an apparatus by which continuous and easily regulated pressure is made upon the *posterior aspect of the projecting vertebræ*, and by which, at the same time, the parts above and below the projection are drawn backwards, and the diseased surfaces separated and fixed apart.

This apparatus consists essentially of two levers—one, composed of a single steel spring, made to lie along the sternum and middle line of the abdomen—the other, consisting of two springs, adapted to the sides of the spinal column immediately over the transverse processes. These springs are encased and connected by soft material, passing from one to the other round the sides of the chest and abdomen, and their bearings on the spine and chest regulated by a series of straps and buckles placed along the front or back of the apparatus, on each side of the springs. By tightening these straps above and below the seat of projection, traction is made in the transverse direction upon the corresponding parts of the spine, so as to draw them from behind forwards. This traction, when the disease is high up, may be increased at the upper end of the spine by padded straps, passing from behind forwards from the back springs round the shoulders, and thence meeting behind in a buckle and strap. Special pads are fastened on the inner aspect of the back springs opposite the seat of projection, so that the action may be exerted specially there, and the parts of the spine above and below be freed from any special pressure.

"By this instrument," says Mr. Hughes "all our indications are met, and many collateral advantages likewise obtained. The steady pressure and traction necessary to relieve the diseased surfaces, and to keep them in a state of local rest, as well as to check the increase

of the deformity, are set up; the shoulders, sternum, and abdomen being the fixed points from which the back levers take their bearing. On the other hand, making the spine the fixed point, a pressure is exercised by the front standards, and regulated with the utmost nicety, so as to prevent or remove the projection of the chest which so often obtains in these cases. In short, the levers may be regulated so as to produce pressure and counter-pressure behind or before, as the surgeon may require or the state of the parts may indicate. No injurious compression is made upon the ribs, and the sense of support afforded by the apparatus is always gratefully acknowledged. By dividing the back standards into two, and thus bringing the pressure to bear upon the thickly-cushioned transverse processes, we run less risk of ulceration than if we were to bear directly upon the thinly-covered and projecting spinous processes. When there is disease in the upper dorsal or cervical vertebræ, a head-piece is added by Mr. Amesbury to the upper part of the support, to relieve the spine from the weight of the head, which can be regulated in its action as circumstances may require.

"Not only does this instrument answer the theoretical indications, but its practical value is immense. The patient begins to improve from the day he puts it on; one by one, under careful management, the symptoms disappear, and health and strength ere long replace an exhausting and deadly disease."

Mr. Hughes's pamphlet, which is intended only "as a prelude to a more extensive monograph on the subject," is well deserving of the attention of orthopaedists.

ART. 106.—*Case of Exsection of a portion of the eighth, ninth, and tenth, dorsal vertebræ.* By Dr. J. C. HUTCHINSON, of New York.

(*American Medical Times*, July 14, 1861.)

In this case, and in fourteen analogous cases of which a summary is given by Dr. Hutchinson, the want of information as to the extent of the injury to the spinal cord and vertebræ suggests in a small compass the leading arguments against the operation, viz., these:—1. We cannot in any case know the amount of injury which the vertebræ have sustained; whether there is fracture of the processes or of the bodies. 2. We are also ignorant of the extent of the mischief which has been inflicted on the cord, whether it be compressed, or lacerated, or divided; consequently the operation may be inadmissible on account of the state of the bones or of the cord. If the case present any features which would satisfy the surgeon that the fracture of the bone was limited to the arch, or that the cord was sound, or if there be any reasonable probability that such is the case, Dr. Hutchinson supposes the operation would be justifiable. But this state of the question virtually decides it in the negative, except perhaps in such cases where the patients survived the immediate effects of the injury, and were operated on several months or years subsequently.

The operation is said to have been successful in two cases. One case, which Dr. Ely says was not benefited by the operation, demonstrates that the operation is not "inevitably fatal," as stated by Sir C. Bell. It received the high sanction of Sir A. Cooper, but has been condemned by Malgaigne, Bell, Brodie, and Hamilton.

CASE.—Patrick M'G—, æt. 35, while engaged in painting oil cloths at Harvey's factory, in this city, on the 19th of December, 1857, fell from the scaffold on which he was standing to the floor, a distance of about fifteen feet. He was picked up in an insensible condition, and removed to an adjoining room, where I saw him within half an hour after the accident. His appearance indicated that he had received some serious lesion, being much prostrated, and complaining of great pain in the abdomen. After examining him anteriorly without detecting any injury except a slight incised wound on the left forearm, he was placed on his belly, when I discovered fracture of the dorsal vertebræ. Brandy was given freely, and he was conveyed to the Brooklyn City Hospital, after having received the last rites of his church. On examining him with more care after he entered the hospital (two hours after the accident), I found the spinous processes of the eighth and ninth dorsal vertebræ depressed, and indistinct crepitus could be obtained at that point. There was also complete loss of motion and sensation below a line drawn across the umbilicus; reflex action could not be excited; mind wandering; priapism; reaction very imperfect. He was placed on a water bed, urine to be drawn off every eight hours. On the third day I observed that the spinous processes, which had been previously depressed, were abnormally prominent. A cough, which he had before the accident, was increased, respiration oppressed, mucous and subcrepitant rhonchi in the lower portion of the right lung, percussion normal. Ordered a cough mixture, local depletion over the seat of injury, and ol. ricini \mathfrak{z} ss., which produced two involuntary evacuations.

On the seventh day the urine passed involuntarily, and from that time until his death it dribbled constantly. The symptoms now indicated a fatal issue, and believing that the spinal marrow was compressed by the displaced fragments of the vertebræ, I proposed to relieve it by elevating or removing the depressed bones. This proposition was thoroughly discussed in consultation with my colleagues, and after much deliberation the operation was decided upon. "Without surgical interference death is inevitable sooner or later; why not therefore give the patient the benefit of the chance afforded by an operation, which cannot in itself add to the serious mischief already existing?" "*anceps remedium potius quam nullum.*" Such were the considerations that determined our decision. Accordingly, on the 29th December, 1857, ten days after the receipt of the injury, the patient was removed to the operating theatre on a bed, where, assisted by my *confrères* of the surgical staff, and in the presence of a number of medical gentlemen, I performed the following operation.

The patient was placed on his left side and subjected to anæsthesia, when an incision about seven inches in length was made down to the spinous processes of the injured vertebræ. The muscles were then dissected off and held aside by curved spatulas, so as to expose completely the posterior aspect of the eighth, ninth, tenth, and part of the eleventh dorsal vertebræ, as far as their transverse processes. It was now ascertained that the eighth and ninth spinous processes were fractured through their bases. These being removed by a few touches of the scalpel, that portion of the spinal cord

covered by the ninth process was exposed. The tenth vertebra was fractured through its arch on either side near the root of its transverse processes, and having cut through the supra and interspinous, and yellow ligaments, which connected it to the adjoining vertebra, I seized hold of its spinous process with a strong pair of tooth forceps, and endeavoured to remove the fractured portion. Having failed in this, I cut through the arch on either side just within the seat of fracture, by means of Hey's saw and the bone forceps; and removed all the fragments that were loose, or likely to exert pressure upon or irritate the cord. The spinal marrow was exposed to the extent of one and a quarter inches in its length, and was covered by a thin layer of coagulated blood, except at one point, where the dura mater could be seen. There was no pulsation in the cord, which induced us to suspect that it had been seriously injured by a fracture of the body of a vertebra. The edges of the wound were approximated with adhesive straps and covered with greased lint, and the patient was removed on a bed to the ward, lying on his left side. After the effect of the anæsthetic had subsided, I could discover no improvement in the symptoms. The paralysis persisted, the urine continued to dribble, and the fæces to be discharged involuntarily. On the seventh day after the operation, the house surgeon observed a sort of suction movement at the bottom of the wound at each inspiration, as if air were drawn into the chest from its surface, through a small external opening. Coincident with this phenomenon the pulse became more frequent, and respiration more rapid and laboured. He died January 7, 1858, twenty days after receipt of the injury, and ten days after the operation.

Autopsy.—Surface of the wound in a sloughy condition. When the ribs were cut through on the left side in the process of removing the fractured vertebra, the left pleural cavity was found to be filled with serum containing pus and lymph, and the left lung was compressed against the spine. This condition was probably produced by a spiculum of bone from the fractured vertebra, which penetrated the pleura, and allowed the air to enter its cavity during inspiration, as noted above. The six lower dorsal vertebræ were removed, and presented the following conditions:—The spinous processes of the eighth and ninth were fractured at their junction with the laminae, and were removed, it will be remembered, during the operation. There was also fracture of the body of the ninth, on the left side near its superior surface, and its left transverse and oblique processes were fractured through their bases. The body of the tenth vertebra was comminuted and compressed between the vertebra above and below into a wedge shape, the point being forward; a portion of its upper front surface was torn off and remained attached to the vertebra above; both transverse processes were fractured through their bases; the lamina was also fractured, as well as the left articular process. The body of the eleventh vertebra was fractured on the right side near the upper surface. The ninth and tenth ribs were broken in two places near their heads. The spinal marrow was torn and in a state of disorganization at the junction of the ninth and tenth vertebræ.

**ART. 107.—*Case of Rupture of the Lung without Fracture of the Ribs.*
By M. MARJOLIN.**

(*Gaz. Hebdom. de Méd. et Chir.*, Dec, 29, 1860.)

CASE.—A boy, æt. 13½, was brought to the Hôpital Sainte-Eugénie, December 3rd, 1860, having had his chest run over by the wheel of a drag.

His dyspnœa was excessive, but there was no hæmoptysis, hæmatemesis, subcutaneous emphysema, or pain in the belly; there was a contusion on the front of the chest, but no fracture of the ribs could be detected. On auscultation, the natural sounds were heard all over the left side of the thorax, but on the right side there was amphoric breathing, with metallic tinkling; the dyspnœa prevented percussion over this side. Death occurred on the third day. "On post mortem examination, the right lung was found to be ruptured in two places. One rupture was situated near the anterior margin of the upper lobe, and was nearly half an inch in depth, the other was at the junction of the upper with the middle lobe. The pleural cavity contained eight or nine ounces of blood, and the surfaces of the lung and of the opposed wall of the chest were covered by layers of recent lymph of considerable thickness. The right lung and pleura were perfectly normal. The third and fourth left ribs, and the third right rib were incompletely fractured. It was only the external surface which was fractured, and the corresponding pleural surface was quite intact."

ART. 108.—*On the treatment of Strangulated Hernia.*

By M. GOSSELIN.

(*Archiv. Gén. de Méd.*, Feb., 1861; and *Med.-Chir. Rev.*, Oct., 1861.)

In a former paper, M. Gosselin stated that he was enabled to communicate the results of 85 cases of strangulated hernia, and he then gave an account of 29 of these cases, which he had treated by forcible and prolonged taxis; and he came to the conclusion that this was a useful means during the first twenty-four or forty-eight hours of strangulation. In the present paper he furnishes an account of his operations, and of those cases of omental hernia in which he has resorted to temporization.

Results of the Operations.—These have been 51 in number—viz., 19 (17 males and 2 females) for inguinal hernia, with 9 recoveries and 10 deaths; 31 (25 females and 6 males) for femoral hernia, with 23 recoveries and 8 deaths; and 1 male with umbilical hernia, who died. Two of the women who recovered after the operation for femoral hernia did so with artificial anus, this having spontaneously healed in one of them. The greater mortality after operation for inguinal hernia was balanced in the sum total of the cases by the success of the taxis in inguinal hernia, the number of recoveries in a given number of cases of each description of hernia being almost alike in the two varieties. The conclusion to be drawn from these cases is, that the result of the operation is to be more apprehended, while the taxis is more advantageous in inguinal than in femoral hernia. The influence of the *duration of the strangulation* is seen in the following figures. In inguinal hernia, before the fiftieth hour of strangulation there were 6 recoveries to 3 deaths, and after that period 3 recoveries to 7 deaths; and in femoral hernia, 11 recoveries to 2 deaths before the fiftieth hour, and 12 recoveries to 6 deaths after it; giving for the two 17 recoveries to 5 deaths prior to the fiftieth hour, and 15 recoveries to 13 deaths subsequent to it. With respect to the influence of the age of the

patient on the result, M. Gosselin goes also into details, from which it seems, that in his cases this did not exert a material effect prior to the age of seventy. At all ages it was the duration of the strangulation which determined the relative mortality. Among the 51 cases operated upon, in 7 the intestine was found more or less *gangrenous* or perforated at the point of strangulation. One of these was an umbilical hernia, and the others were femoral hernia, four of the patients dying. In 3 cases the sac contained only a partial noose of intestine. Thus, the conclusion may be drawn that the taxis may be justifiably employed at a later period in inguinal than in femoral hernia, and especially when this last from its small size may be supposed to contain only part of a noose of intestine.

M. Gosselin adverts to a point which he once thought a matter of indifference, but which he now regards as of importance. Does the presence of omentum increase or diminish the danger of a strangulated hernia? It results from these cases,—(1) that in all the cases in which gangrene of the intestine was found, no omentum whatever existed in the sac; (2) that of 43 cases in which the facts concerning the omentum were noted, it was found that in 26 cases in which it was not present, there were 15 instances of recovery and 11 deaths, while in 17 entero-epiploceles there were 11 recoveries and 6 deaths. Thus, the issue of the case seems to be rendered more favorable by the presence of the omentum; and supposing the experience of other surgeons corroborates this view, it becomes of importance to determine in a given case which of these two circumstances we have to do with. M. Gosselin suggests that the clinical investigation of hernia requires some alteration. The questions of the seat of strangulation, and the existence, obstruction, and inflammation have been sufficiently elucidated, and it is now desirable to determine with more precision between the choice of taxis, the operation, and temporization. As material for examination in this point of view, he offers the above conclusion, that enterocele, and especially when containing only part of a noose of intestine, calls for more prompt proceeding than does entero-epiplocele. His own rule is never to allow an *intestinal* strangulation to remain under the plea that it is but slight and of but little urgency. Once recognised, he does not leave the patient until the hernia has been reduced either by the taxis or the operation.

Temporization has been observed by M. Gosselin in 5 of his cases, 2 of these being examples of umbilical, 2 of inguinal, and 1 of femoral hernia. For the umbilical hernia this plan was pursued because they were old, large, partly irreducible, and seemingly chiefly constituted of omentum. Calomel and jalap were administered, and produced evacuations, and the condition of the hernia became much what it was prior to the occurrence of symptoms of strangulation. In the case of large irreducible inguinal hernia manifesting signs of strangulation, the author would act in a similar manner. The other three cases, two of inguinal and one of femoral (hitherto reducible) hernia were also treated successfully by the same purgative, M. Gosselin believing from its physical characters the tumour in each to consist of omentum. Stools followed before the tumour had undergone any diminution,

and the symptoms gradually abated. In two an indolent projection, of less size than at first, persisted; while in the third case all swelling had entirely disappeared by the end of thirty-five days; these different results doubtless depending upon whether the omentum did or did not adhere to the sac. To the objection that the hernia in these cases was inflamed and not strangulated, M. Gosselin replies, that he has long been persuaded that when a hernia becomes suddenly irreducible, contemporaneously with symptoms of strangulation, such hernia has become too large to repass by the aperture, and is consequently strangulated by this. Without doubt there may be also inflammation, which indeed may have been the primary phenomenon. But whether inflamed or strangulated, M. Gosselin is of opinion that omental hernia should be left to itself, and treated only by rest and emollients, and that the sagacity of the surgeon should be employed, not in examining whether a hernia is strangulated by the neck of the sac or a fibrous ring, whether it is inflamed or strangulated, but in discovering whether it contains omentum alone, or intestine with or without omentum.

ART. 109.—*Case of Strangulated Hernia successfully treated by inverting the patient.* By Mr. POUND, of Oulham.

(*British Med. Journal*, Aug. 17, 1861.)

CASE.—Mrs. E—, æt. 50, has been the subject of hernia (oblique inguinal) of the right side for many years. She has also prolapsus uteri. She has at different times suffered very much with severe symptoms, as sickness and pain; and the hernia has often been irreducible by her own efforts for some days. These attacks have lately become more frequent. She first became a patient of mine in March last. At that period she had sickness, constipation, pain in the abdomen, and the hernial tumour was as large as an orange, not very tender, but could not be returned. Under the use of opium and an enema, the symptoms subsided, and she was able to effect reduction herself. A second attack occurred in May; the same treatment was pursued with a like successful result.

I was called to the case for the third time on Monday, the 22nd July. I saw my patient at 6 p.m. She stated that, feeling poorly the past week, she had taken two "antibilious" pills; the last pill she had taken on the previous Saturday night, and her bowels were moved on Sunday morning. She had been very sick; and the hernial protrusion had occurred during violent retching, and had existed since midday on Sunday. The sickness was, when I saw her, very troublesome; the countenance was anxious; the belly rather full and distended. The taxis failed to make any impression on the hernia. The tongue was clean; pulse 108, weak. A pill containing opium was ordered to be taken every four hours, with two minims of hydrocyanic acid in mixture, and an injection to be administered immediately.

July 23, 10 a.m.—The sickness was the same. The injection was returned immediately last evening. There was no action of the bowels. The tumour in the groin was in the same state. The opium and mixture were continued; and the enema was repeated; pulse 96.

6 p.m.—The husband came to my surgery, and informed me that the injection had acted; that she had not been sick since my visit in the morning; that the hernia was smaller; and that she had had a little sleep. My experience of the case led me to hope that the result would be as fortunate as on former occasions.

July 24, 11 a.m.—I found that the account given last evening by the husband of the patient was too favorably coloured. The sickness had now been very troublesome since 3 a.m. A little gruel tinged with faecal matter was shown to me as the stool. The tumour had diminished nothing in size, and was a little tender on handling. About the neck there was considerable thickening. The tongue remained clean; pulse 96. The countenance was somewhat anxious; the belly felt distended, but was not very tender. The enema was repeated; and she was ordered to take a grain of opium directly, and another grain an hour afterwards.

3 p.m.—Considering the probability to be strong that an operation would be ultimately required, I asked my neighbour Dr. Scott, to see the case with me. The injection had returned tinged with faecal matter. She had not vomited since my last visit. The taxis, tried both by Dr. Scott and myself, failed to reduce the hernia. We now introduced a long tube a considerable distance, and injected a large quantity of warm water; this soon returned coloured, and at the same time she had a fit of vomiting. On her return to bed, the taxis was again applied, but with no better result. Still we considered the symptoms did not call for operative interference at present. Ice was now applied to the swelling, and two grains of opium given at 5 p.m. We did not, either of us, consider that the warm-bath or chloroform were called for in the case. With regard to the former, the patient was weakly; and we felt doubtful about the advisability of administering chloroform from certain chest symptoms.

7 p.m.—We again met in consultation. She had had a comfortable nap; and had not vomited since our last visit. No action of the bowels had taken place. The tumour was precisely the same.

I now proposed to Dr. Scott and to the patient to try the plan of inversion lately recommended by Mr. Jessop of Cheltenham; but the patient seemed unwilling to allow resort to any further measures, and expressed also her determination not to allow the operation, even if we ultimately decided that it would be necessary. Sickness was now again felt; and vomiting occurred whilst we were down stairs consulting and advising the husband. The vomited matter, on inspection, was found to be stercoraceous. We both felt strongly that further delay would not be justifiable; and we urged the absolute necessity of our being allowed to use the means still at our disposal. The patient at last consented; and we proceeded to "invert" her. We placed a chair upside down by the side of the bed, so that the seat projected under it, and the legs with the back of the chair formed an inclined plane from the bed to the floor; on this was placed a long bolster. The patient was now taken by the shoulders, and brought to the side of the bed; the head and shoulders were gently lowered till they rested on the floor on pillows, whilst the legs remained on the bed. This plan is much more delicate, I fancy, than the one of raising the patient by placing the legs over the shoulders of an attendant. The first moment of the application of the taxis was an anxious one; and, I may add, one of curiosity. Will it answer? Yes; in less time than it takes me to write this account. First, a sensation of adhesions giving way; then a gurgling; and then a complete disappearance of all hernial protrusion.

The experiment was successful; the relief speedy and complete. An hour afterwards she had a copious evacuation, and at the same time a little stercoraceous vomiting. She then took thirty minims of Battley's sedative; since which she has experienced no bad symptom whatever.

ART. 110.—*On the treatment of Perforated Intestine in Strangulated Hernia.* By M. BAUCHET, and others.

(*Gaz. des Hôpitaux*, Nos. 26, 29, 32, 35, 38, 41, and 44; and *Med.-Chir. Rev.*, July, 1861.)

A case related by M. Bauchet to the Paris Surgical Society gave rise to an interesting discussion upon the manner in which intestine which has become spontaneously or accidentally perforated in strangulated hernia should be treated. On exposing a femoral hernia, a minute aperture, through which bubbles of air escaped, was observed; and relying upon some successful cases published by Velpeau, the gut was nevertheless reduced without any suture having been applied. The patient went on well for some days, when erysipelas supervened, which carried her off. Fæcal matters had been discharged from the wound; and, at the autopsy, an artificial anus was in a fair way of formation. M. Bauchet stated, that in the event of a similar case occurring to him, he would pass a ligature through the mesentery, so as to keep the intestine near the hernial region, reduce the strangulated noose, with or without a suture, according to the size of the perforation, and administer opiates. M. Chassaignac, while believing the reduction of a healthy portion of the intestine, which had become slightly wounded during the operation, justifiable, would prefer the English method of applying a lateral ligature, which is certainly indicated when the intestinal coats are diseased. M. Verneuil objects to the reduction of intestine, even with a very minute perforation, for we have no security against the extension of the ulceration, and even a slight effusion may do enormous mischief. With respect to the application of a suture prior to reduction, M. Verneuil relates a case in which a puncture accidentally made during an operation was closed by two points of suture. After doing well at first, the patient succumbed to peritonitis on the sixth day; and it was found that the wound had reopened after the fall of the sutures, and given issue to fatal effusion. M. Verneuil seems to place little reliance on any other means than the formation of an artificial anus. However desirable this may be in the case of large apertures in the intestine, M. Broca cannot agree in its propriety in minute perforations. When these are accidental, he regards the English practice of applying a ligature as the best; while, when they are the result of the action of the stricture, endeavour should be made to excite adhesions between the intestine and parts in its vicinity. M. Giraldes has a high opinion of the efficacy of the suture, especially that of Gely of Nantes. He referred to an instance of its success in his own practice; and without much research he has collected references to twenty-two published cases, in which the suture has been applied, either for gangrenous ulceration, simple perforation, or wounds made during the operation, and in seventeen of these the result was favorable. M. Richet considers that when the intestine exhibits

only superficial erosions, it should be gently returned, and left near the internal ring; while, when there is ulceration, it should be kept externally by means of a ligature passed through the convexity of the intestine and the sac. M. Jarjavy is of opinion that we sometimes reduce a perforated intestine contained in femoral hernia without being aware of it—the perforation lying concealed at the bottom of the groove produced by the constriction. He believes, also, that rupture has been induced by the administration of purgatives after the operation. The possibility of inducing perforation by drawing out the gut for the purpose of examination having been adverted to, M. Velpeau observed, that although he did not now so exclusively prohibit this practice as heretofore, it was one which called for great care when the intestine had undergone much change. When there is great resistance to this traction, after the division of the stricture, the gut may be gently passed up again, bringing it down at once on the occurrence of the slightest fecal discharge. M. Velpeau having published five instances in which success had attended the return of perforated intestine, he had been too readily regarded as an advocate of this practice as a general procedure. In all these cases, however, the gut was quite healthy, and only a minute aperture existed at a single point. He considers that the formation of an artificial anus had been too lightly spoken of during the discussion, for not only is it sometimes an incurable affection, but many die before it can be established. One point he desired to insist upon—namely, the impossibility of laying down any absolute rules for operation in hernia. Each case is a new fact, which taxes the ingenuity of the surgeon. M. Huguier has been in the habit of endeavouring to supersede the necessity of making traction on the intestine, by desiring the patient to cough; and when this does not bring it down sufficiently, he applies a forceps to the mesenteric border of the intestine, and to the mesentery. In the case of perforated intestine, he disapproves of both its reduction and the application of a suture. He respects any adhesions that may exist, and endeavours to fix the intestine either just above or within the canal by passing a thread through any portion of omentum that may be found. If this cannot be done, the thread is passed through the portion of the intestinal coats which seems to threaten to become gangrenous. When, however, the intestine is as cleanly divided by the stricture as by a cutting instrument, or when it is accidentally wounded during the operation, three or four points of suture may be executed by passing a fine needle and flat silk through one or two of the tunics only, so as to bring the serous surfaces into contact. M. Gosselin has always, in the sixty operations which he has performed for hernia, made traction upon the intestine for the purpose of examining it. He does not think that a surgeon is justified in endangering the life of his patient by returning a portion of intestine in which even a minute perforation exists. Nor does he approve of the application of a suture, or the laying open the perforated intestine in order to form an artificial anus. He believes that the best practice consists in leaving the perforated gut in the wound, after having liberated the stricture. If gangrene supervenes, an artificial anus is the result; while, when a mere fecal fistula results, reduction takes place slowly and sponta-

neously, the aperture having become cicatrized or effectually secured by means of the adhesions which have sprung up. No ligature or other means is required to retain the intestine in the wound, for unless compression be employed, it has little tendency to return suddenly. M. Demarquay commented upon the danger of the practice so generally followed in France, of administering purgatives immediately after the operation. He has derived great advantage from substituting divided doses of opium during the first twenty-four hours. M. Robert observed that traction is easily enough made in inguinal hernia, which usually contains an entire noose of intestine; but the case is very different in small femoral hernia, having a portion of intestine very deeply placed, much narrowed at the seat of stricture, and distended above this. If the gut is inflamed and friable, persistence in traction may easily lacerate it. M. Chassaignac advocates making traction in order to ascertain the condition of the intestine, and the reality of its liberation. An artificial anus, in the case of perforated intestine, he observes, is not always of easy formation; while fæcal fistulæ frequently heal spontaneously. The best practice, therefore, consists in relieving the stricture, and leaving the perforated gut near the ring.

ART. 111.—*On the substitution of a blunt instrument for a sharp blade in the operation for Hernia.* By M. AMÉDÉE JOUX, of LA FERTÉ-GAUCHIER.

(*Journ. de Connaiss. Méd.*; and *Journ. de Méd. et Chir. prat.*, Aug. 1861.)

In this paper M. Joux describes the advantages he has derived for twenty years from *laceration* as a substitute for *incision* in the surgical treatment of all varieties of incarcerated hernia. He concludes with the following remarks.

The operation for strangulated hernia is not so perilous as we find it stated in classical works on the subject, and to avert the dangers authors dwell upon the operation should be resorted to at an early period, and the parts should not be fatigued by often useless and always hazardous attempts at reduction.

The skin only should be divided with the knife; the remainder of the operation should be performed with a blunt instrument, such as a spatula or a probe, but always by laceration.

As to the division of the stricture, in order to avoid hæmorrhage, and to avert the disadvantages attendant on the use of the blunt-pointed bistoury, which often divides the structures in a greater extent than the surgeon contemplates, it is in all cases proper, after having introduced the extremity of the finger into the stricture, to insert the small end of the spatula, its rough surface being in contact with the constriction, and to use it as a lever, the fulcrum of which is afforded by the finger, and the power is applied to the broad extremity of the instrument; by thus endeavouring to distend the tightest parts of the ring, dilatation is very speedily effected and reduction may be obtained, if indeed it does not take place spontaneously, *without the escape of a single drop of blood.*

ART. 112.—*On Intestinal Obstruction by Bands.* By Mr. GAY.

(British Med. Journal, April 13, 1861.)

Mr. Gay defines the term "band" to mean a structure distinct from ordinary adhesions, and having a peculiar origin, texture, and relations. Generally there is only one such band; and never (as far as the author had been able to ascertain) more than two; he therefore applies to it the term "solitary band," in contradistinction to the filamentous bands often met with in the abdominal cavity, and which are only a variety of common plastic exudation. The solitary band is distinguished from these—1, by size; 2, in being attached at the extremities only; 3, in having a glistening surface, as though it had a peritoneal covering; 4, in being often tubular where it stretches from one hollow viscus to another; 5, in having always some definite length. It seems as if, when the solitary band is formed, the parts have been in abnormal relation to each other; while in simple plastic exudation, the parts appear not to have been displaced.

The practical conclusion at which Mr. Gay arrives, is, that the present means of diagnosing internal obstruction by bands are imperfect; and that consequently many cases will escape the most careful scrutiny as to their cause. On the other hand, the indications from the cases which he had analysed and examined encourage and even authorise the surgeon, in cases presenting a certain combination of features or evidence, to advise abdominal section. These evidences should be—1. An antecedent abdominal affection, of such severity as to lead the surgeon to believe that it might have been attended with some destructive process. 2. Suddenness of the attack, without previous visible deterioration of health. 3. Pain, first localized, then tenderness over a large area. 4. Distension, with general dulness at first, and subsequent concentration of dulness and tension towards the original seat of pain. 5. Vomiting, especially if it speedily become fecal. Mr. Gay believes that no such conjunction of symptoms can take place without some sudden alteration in the relation of parts within the abdominal cavity; and that in most cases a bridle will be found to be either the direct or indirect means of constricting a portion of intestine. As soon as a fecal vomiting has set in, the surgeon is, in Mr. Gay's opinion, justified in proceeding to explore the abdomen, rather than allow the patient the alternative of almost certain death. Should a band or bridle be found, some caution must be observed in its treatment. It should be divided; but if it unite two portions of hollow viscus, it may be tubular. Consequently, the two cut ends should be twisted or tied, so as to prevent the escape of the intestinal contents.

ART. 113.—*On the radical cure of Inguinal Hernia.* Mr. HOLMES COOTE, Assistant-Surgeon to St. Bartholomew's Hospital.

(Lancet, June, 1861.)

"Those," says Mr. Coote, "who are in the habit of frequenting the wards of St. Bartholomew's Hospital may remember my directing

attention in the early part of this year to a case in which I was called upon to operate for the relief of strangulated inguinal hernia on a man on whom I had performed Wutzer's operation for the radical cure of hernia three years previously, with apparent success. In this case, as in most others, the inverted plug of integument had come down, and a fibrous constriction of the peritoneal sac remained, which proved the seat of the stricture. I believe this fibrous constriction, in part at least, to have been due to the changes consequent upon the passage of the needle in Wutzer's operation, and it had served to keep up the intestine very fairly for above two years and a half. It then yielded, and became the seat of stricture to a protrusion somewhat larger than had ever been before.

"I saw last year a boy on whom I had performed Wutzer's operation six months previously. In his case, too, the intestine had come down again; the protrusion was of larger size, and the adaptation of a truss was difficult.

"Under these circumstances, I was induced to ask my friend, Mr. Kingdon, Surgeon to the City of London Truss Society, the results of his experience amongst those who apply to him for trusses, and he favoured me with the subjoined list of cases, which I enclose, with all the details, that any of the surgeons who operated may be able to verify or to contradict their accuracy.

"There can be only one opinion respecting operative surgery. Its only claim is based upon the permanent benefit which it can effect; and if experience proves that any one operation fails, even at a remote period, in its object, it is the duty of those acquainted with the failures to make the facts public, in order that a proper value may be attached to the proceeding.

CASE 1.—Thomas B—, æt. 35, of Welling, Kent. Ruptured for the first time at the age of thirty-two. Wutzer's operation for the radical cure of hernia was performed in St. Bartholomew's Hospital, by Mr. Coote, in 1858. Case reported as cured. In 1859 he applied for a truss, at the City of London Truss Society, with oblique hernia on both sides.

CASE 2.—Nathaniel J—, æt. 45, of Phoenix Terrace, an engineer. Operated on in the same way as Case 1, by Mr. Coote, three years and a half ago. He continued well until a few months back. Has applied for a truss, having now hernia on both sides.

CASE 3.—Thomas P—, æt. 30, West India Road, Limehouse. He was first ruptured at the age of twenty-eight. The operation for the radical cure was performed by Mr. Corner, of the Poplar Hospital. He applied for a truss, having a scrotal hernia, in 1859.

CASE 4.—John H—, æt. 51, of Church Way, Somers Town. The operation for the radical cure was performed by Mr. Erichsen. He applied for a truss in 1859.

CASE 5.—James A—, æt. 15, applied for a protecting truss, having just risen from bed after the performance of Wutzer's operation. No immediate protrusion.

CASE 6.—John T—, æt. 44, of Duke Street, Westminster Road, bedstead-maker. Ruptured at the age of twenty-four. He came for a truss at the society's house in 1860, being at that time forty-four years of age. He had undergone the operation for the removal of a diseased testis nine months before, by Mr. Coulson, at St. Mary's Hospital. Had hoped that the hernia

was cured at the same time. He now (1860) suffers from a large scrotal hernia.

CASE 7.—George C—, æt. 43, of the Broadway, Westminster, gasfitter's labourer. The operation for the radical cure was performed by Mr. Lee, of King's College. He applied for a truss on October 5th, 1860.

"I thought," says Mr. Kingdon (writing to me), "and still believe, that I had more of your cases; but the foregoing are those which I can vouch for at present. Two, and I think a third, of Mr. Hutchinson's have come before me; one also of Mr. Wood's."

ART. 114.—*Case of Peri-cæcal Abscess simulating Strangulated Inguinal Hernia.* By Dr. P. S. MACLAREN, of Lasswade.

(*Edinburgh Medical Journal*, June, 1861.)

On the afternoon of February 21st, 1861, I was called to John Fife, a collier, æt. 54, residing at Rosewell.

For the last two years he had been unable to work, suffering much from cough and weakness. "Nine months ago," he says, "he had a rupture above his right groin, which, after some delay, was reduced by a medical man." Since then he continued in tolerable health, until a fortnight ago, when he noticed a painless, colourless swelling, reappear in the right inguinal region. On the tenth day, however, the tumour became larger and painful, especially on pressure. His abdomen felt tense, and the bowels remained obstinately costive, notwithstanding the frequent administration of castor oil. Sickness was present, but no vomiting. I found him lying in bed on his back, with the right thigh flexed; his countenance pale and anxious; breathing hurried; pulse about 90, small and wiry. The swelling occupied the right inguinal canal, was nearly a hen's egg in size, of a semi-elastic, or rather doughy, consistence, and a slight dusky-red hue could be detected over the lower or pubic extremity. On applying the taxis, the size diminished slightly; but the length of time the swelling had been down, together with the reddened and painful state of the tumour, made me have little confidence in this plan of treatment.

Accordingly, after consulting with Dr. Smith and Dr. John Smith, it was deemed advisable to operate, which I proceeded to do in the usual manner. As the tumour did not pass beyond the external inguinal opening, I began the incision over the internal aperture; and after cutting through the skin and cellular tissue (which was dense and agglutinated), I touched the fibres of the external oblique tendon with the point of the knife, when a gush of fetid pus arrested the proceedings. About six ounces escaped. In order to discover the seat of the abscess, and at the same time to give free vent to its contents, the opening was dilated upwards and outwards with a probe-pointed bistoury, after which I was enabled to pass the forefinger through the enlarged internal inguinal opening into the pelvic cavity.

The wound was left open, covered with tepid-water dressing, and patient replaced in bed, lying on his right side.

Ordered—Sol. Mur. Morph. ʒj, and brandy ʒij, every two hours.

February 22nd.—Has slept four hours; feels easier; wound discharges small quantities of pus, and is free from pain; bowels unmoved. Pulse 90, full and soft.

Ordered—A water enema.

23rd.—Enema acted very ineffectually, and was repeated at time of visit with good results. Has slept six hours, and eaten some panado.

Ordered—Pil. Col. et Hyosc. ij, and another in six hours, if necessary.

24th.—Pills have acted gently. Wound healthy. Abdomen soft and painless, even on pressure over cæcum.

Ordered—Beef tea and half an ounce of brandy three times a day.

On the 26th the wound was brought together by strips of plaster; and on the 17th of March it had completely cicatrized, the patient going about as formerly.

Towards the end of March the patient was seized with acute bronchitis, which greatly obstructed the circulation, and gave rise to general anasarca; after a few days' illness he died. On examining the body thirty-six hours after death, I made the following observations:—The cicatrix in the groin was firmly consolidated. On opening the abdomen, the omentum was dragged entirely to the right side, and its lower margin was fixed to the anterior abdominal wall. The adhesion, four inches long at its inner extremity, commenced about an inch above the internal inguinal opening, and ran upwards and outwards in a line parallel to Poupart's ligament. It was impossible to separate the omentum from the abdominal wall without tearing.

The caput cæcum lay close to the outer margin of the ring, and the appendix vermiformis coursed round the upper border in so near proximity to the opening, that had its division been necessitated by stricture, the gut would have been in great danger of being wounded. The connective tissue which bound these structures to their abnormal situations was soft, and easily broken up by the finger.

The internal inguinal ring was considerably dilated. No traces of pus were discovered.

ART. 115.—Case of recovery after Bayonet-wound through the Abdomen. By Dr. CLEMENTS, Assistant-Surgeon, U. S. Army.

(*American Quar. Journal of Med. Science*, July, 1861.)

CASE.—Musician E—, 7th Regiment Infantry, æt. 32, a healthy, temperate man, of spare figure, received on 17th June, 1858, at the crossing of the "Big Blue" River, Kansas, a wound from a bayonet in the hands of a deserter which entered at the free extremity of the last false rib on the left side two inches above the crest of the ilium and about four inches from the spine, and emerged at the opposite side of the body, at the edge of the cartilages of the false ribs, two and a half inches to the right of the median line.

The wound was inflicted early in the morning while the patient was fasting, and at the moment he was in a stooping posture, which threw the left side higher than the right; the bayonet was run up to the hilt, and the patient grasped its point as it emerged through the right side.

There was very little hæmorrhage from either wound; he walked a few steps but then fainted. The wound was simply dressed with cold water, and he was left at a cabin near the roadside with a careful attendant. During the day he rejected all fluids taken into the stomach, and in the evening had great pain over the whole abdomen, and was unable to extend the left thigh and leg; he was taken with hiccough, which soon gave place to a severe convulsive movement, attended with twitching of the face and

coldness of the body, but without insensibility; these attacks were each of some minutes' duration, and recurred five times during the night.

The following day he had fever, high-coloured urine and frequent micturition, and his abdomen was painful, swollen, and hard. On the 19th, two days after the receipt of the wound, he suffered so much from these symptoms that the attendant gave him "a dose of calomel and rhubarb," and the pain increasing towards evening, he cupped him over the abdomen and immediately after applied a blister; at night he had two free evacuations from his bowels, which gave him great and speedy relief from the pain, after which he obtained some sleep.

On the 21st I saw him for the first time with Assistant-Surgeon Williams, when we received the foregoing account from the attendant, a very reliable, intelligent man, who had been left with him. The particulars as to the infliction of the wound were confirmed from other reliable sources, and from the patient himself.

The triangular-shaped wounds of the bayonet were found in the positions already mentioned, that in the left loin being the largest, and both in process of healing; his countenance was good, pulse regular and of normal frequency, tongue clean, and but little thirst; there was no pain on pressure in the course of the wound, nor at any part of the abdomen, except a small spot in the left iliac region and upper inner side of the left thigh; the urine was rather high coloured, but presented to the eye no indication of blood, and particular inquiry elicited nothing to induce the belief that it had at any time been bloody; he passed it without difficulty, and was still unable to extend his left thigh. A quarter of a grain of morphia three times a day was directed, complete repose, and the lowest diet.

22nd.—Pulse normal; slight pains still in the right iliac region, increased by attempts to extend the thigh; bowels moved naturally last night. Treatment continued.

26th.—Ninth day. He has steadily improved to this date on the lowest diet, and without an untoward symptom, and, with the exception of some slight pain about the left groin when he extends the leg of that side, he is now well.

He soon after joined his regiment, and made the long and wearying march to Utah, and when I last saw him, more than a year afterwards, he continued quite well, suffering no other inconvenience from his wound than a dull pain in his left loin when he ran or jumped.

ART. 116.—*On the treatment of Hæmorrhoids.* By Mr. J. R. LANE, Surgeon to St. Mark's Hospital for Diseases of the Rectum.

(*Medical Times and Gazette*, June 29, 1861.)

Mr. Lane bases his remarks upon experience obtained during a three years' connexion with St. Mark's Hospital for Diseases of the Rectum. Subdividing these complaints in the usual matter into external and internal, he commences by briefly describing the nature of the two conditions, giving his views with respect to the structures involved, and an account of the leading symptoms in each. In speaking of the treatment of swellings situated external to the anus, he says that when they are caused by the rupture of a dilated hæmorrhoidal vein, the best and most effectual remedy is an incision, to allow the

coagulum to escape ; and that when they are formed by enlarged and inflamed portions of skin, excision with the knife or scissors is the only method which could be depended upon for effecting a permanent cure. He strongly condemns the use of the ligature, which, notwithstanding all that had been written on the subject, he still finds to be not unfrequently employed in such cases. With respect to the curative treatment of internal hæmorrhoids, two principal methods had been practised—excision, and the ligature, to which might be added a third, viz., cauterization with nitric acid. Excision, which was formerly in common use, possesses many and great advantages. The tumours could be readily, rapidly, and completely removed. The operation is attended with less pain, both at the time and subsequently, than is occasioned by the ligature ; it produces less irritation, and is followed by more rapid recovery. It has, however, one very serious disadvantage, the liabilities to dangerous hæmorrhage, enhanced by the great difficulty in getting at the bleeding surface to arrest it. This danger has been felt to be so great as to outweigh all its other advantages, and has led to its almost complete abandonment in the present day, and to the substitution of the ligature in its place. In every respect, however, except in avoiding the risk of bleeding, the operation by ligature is inferior to that by excision. Such being the case, it would be admitted to be a desideratum if an operation could be devised which should combine the principal merits and avoid the principal demerits of both. Such an operation has been devised by Mr. Salmon, and has been practised by him with great success for many years. It might be said to be a sort of compromise between excision and the ligature. It consists of a separation of the hæmorrhoidal tumour from the subjacent parts, for about the lower three fourths of its extent, leaving it attached by the remaining upper fourth, which was then included in a ligature. The tumours were drawn down by means of a hook with four prongs, contrived for the purpose, and the division of the lower part of them was made with scissors. These structures were always supplied by vessels which descended from above, close beneath the mucous membrane, and the trunks being necessarily included when the upper part of the tumour was tied, all danger of bleeding from the divided branches was avoided. Thus the smallest possible amount of tissue was included in the ligature, and what was included was, as far as possible, removed from the anus. This latter circumstance he believes to be a great advantage, for the membrane an inch within the anus possessed little of that acute sensibility which characterised the integument close to that aperture. The operation being thus far completed, another point of importance is the management of the œdematous and everted collar of integument, which always surrounds internal hæmorrhoids when they are protruded. The protrusion from within is necessarily accompanied by an eversion of the skin with which it is continuous, and it by no means follows that there is any superfluity of this latter tissue. To remove all this apparently superfluous skin would be followed by a greater evil than the disease itself—an immediate contraction of the anal aperture after cicatrization had taken place. The rule which the author has found it desirable to follow is to remove all

irregularities and all pendulous portions of skin freely, but not to meddle with the circular fold which surrounds the protruded parts. It might be expected that inconvenience might in like manner result in the interior of the rectum from the free removal of mucous membrane, which is a necessary part of these operations; such, however, he has not found to be the case. He has, indeed, in some few cases, where the disease was extensive, seen a very decided narrowing of the lower end of the rectum for some weeks after the operation, but it had in every instance gradually subsided, and all inconvenience had disappeared. The cicatrices of the mucous membrane do not appear to have the same tendency to contract or to remain firm and rigid which is found to be the case with cicatrices of the skin. In Mr. Salmon's operations, the adoption of which he strongly recommends, the author finds the subsequent pain and irritation very much lessened; and in evidence of this he mentions that he has very rarely found it extend so as to involve the urinary organs, whereas retention of urine was, according to his experience, the rule rather than the exception after the ordinary operation with the ligature. A circumstance which he thinks worthy of note is the very slight risk attending operations on the rectum if anything like care were taken in the selection and management of cases. He has during the last three years and a half performed 166 operations for hæmorrhoids, 202 for fistula, and 97 for fissures, polypi and procidentia, 465 in all; he has assisted at about an equal number in the practice of his colleague, Mr. Gowland, making a total of upwards of 900 operations, the results of which have been carefully recorded. Amongst them there has not been one instance of pyæmia, and not one instance of erysipelas; in fact, excepting in four cases, there has not been a single complication at all of a serious character or deserving of notice. These four exceptions were cases of tetanus, which occurred in the spring of 1858, within a very short period of each other. Two occurred in his own practice, and two in that of Mr. Gowland. They all followed the operation for hæmorrhoids, and all four were fatal. He thinks, however, he was justified in considering them as accidental, especially as numerous deaths were occurring from tetanus in other hospitals in London at the same period, and the disease might, therefore, fairly be said to have been epidemic at the time. In one hospital, which he mentions, nine deaths had taken place from tetanus within a period of two months. It has never been noticed by others that operations on the rectum were especially liable to tetanus, and in his own subsequent experience, which extended to several hundred cases, he had seen no other example of it. Setting aside, then, these cases as altogether exceptional, he thinks there are few operations in surgery which affords with so much certainty such complete and permanent relief from serious disease at so small a cost of suffering and risk. With respect to the treatment of hæmorrhoidal tumours with nitric acid, his experience does not lead him to recommend it for general adoption; but neither is he disposed to condemn it indiscriminately, as some of its opponents have done. No doubt much injury might be caused, and has been caused, by its careless employment, but he has himself used it in twelve cases, and his objection to it is rather on the score of its

inefficiency than on any active injury which he had found result from it. He believes it to be well adapted for those cases in which there is an abnormally vascular condition of the mucous membrane of the rectum, without the development of large or distinct tumours which could be protruded; but under the opposite circumstances repeated applications of the acid are necessary to reduce the diseased parts to the level of the surrounding surface, and the treatment then occupies a much longer time, and is in reality much more severe and much less likely to be permanently effectual, than the operation by the ligature, or that modification of it which he recommends.

ART. 117.—*On operating for Fistula in Ano in Phthisical Subjects.*
By Dr. THIRY.

(*Presse Méd. Belge*, No. 21, 1861; and *Med.-Chir. Review*, July, 1861.)

These observations are intended by their author as a sort of protest against the doctrine maintained by M. Jobert—viz., that the objection usually held by surgeons to operate for fistula in patients suffering under phthisis is a mere prejudice, to be entirely discounted; the fistula, in fact, being just like any other emunctory, a cause of debility in this disease, and as such to be suppressed as soon as possible. If the action of a fistula resembled that of a prolonged blister or an issue, as stated to do by M. Jobert, Professor Thiry would agree with him in regarding it as an unfortunate complication, to be got rid of as soon as possible. But this is only a faulty interpretation; for he has found in all the cases that have come under his care that fistulæ and abscesses occurring about the anus in the subjects of pulmonary tubercle are the result of tubercular deposit at the margin of the anus, constituting only an additional manifestation of the general diathesis. The discharge from such is not an evacuation of matter enfeebling the patient, but a discharge of tubercular matter mingled with the pus, and benefiting the patient thus far by removing tubercle which might otherwise have been deposited in the lungs and aggravated his condition. The matter contained in the discharge from these anal abscesses or fistulæ is shown by microscopical examination to be in part tubercular, and unsoftened tubercular matter also lines the bottom of the cavity whence it proceeds. Soon after the establishment of the fistula the chest symptoms often undergo a notable amelioration, while the patient exhibits many other signs of returning health. If this truce be taken advantage of by the administration of suitable remedies, complete recovery even may ensue, the fistula itself, the last trace of the tubercular diathesis, disappearing spontaneously. Such a result is by no means so rare as generally supposed, and it would be of yet more frequent occurrence if fistulæ were more frequent than they are, and if proper perseverance were observed in the application of remedies and the observance of an azotized diet. Under the influence of fistulæ and of the treatment which they allow of being put into force, the author has known cavities to have become cicatrized; and so far from regarding them

with Jobert as aggravating complications which should be at once removed, he regards them as highly salutary, and would recommend their provocation by every possible means when nature does not produce them spontaneously. The success which M. Jobert states that he has obtained in operating in these cases can only be explained by the supposition that he has had to do only with fistulous tracts proceeding from mere phlegmonous abscesses. A phlegmonous abscess, quite independently of tubercle, may become developed at the margin of the anus, and the resulting fistula may be operated upon with even advantage to the patient; but the difficulty is to distinguish such a case from a fistula acting as a means of elimination of tubercular matter, to the great advantage of the pulmonary affection and the general constitution. The decision is sometimes difficult, and always important, as the very life of the patient may be dependent upon it. However, the general conclusion at which M. Thiry arrives is, that the operation for fistula performed at any stage of phthisis only precipitates its fatal termination. He selects two of the cases which have come under his own notice, as illustrative of the advantage derived from respecting the fistula, at both an early and a late stage of the affection; and he adverts to others in which a contrary practice has been followed by the worst results.

ART. 118.—*On a new Remedy in irritable conditions of the Bladder.*

By Mr. HENRY THOMPSON, Assistant-Surgeon to University College Hospital.

(*Lancet*, Oct. 12, 1861.)

This new remedy is the underground stem, popularly called "root," of the well-known grass, *Triticum repens*. As "a remedy for the gravel," it has long enjoyed much repute in some country districts. It belongs, also, to the *materia medica* of France, where it is esteemed as an "alterative and diuretic," but is not employed for the cases in which Mr. Thompson has found it useful.

"My first acquaintance with it," writes Mr. Thompson, "was derived about three or four years ago from a gentleman in the country, who was the subject of severe and long-standing stricture of the urethra, and who had long used it to relieve the frequent and painful micturition of which he was the subject. In this case no drug in the 'Pharmacopœia' afforded so much relief as the remedy in question; but this circumstance I was at first inclined to attribute rather to imagination, or to a peculiar idiosyncrasy, than to the virtues of the plant. However, on his strong and repeated representations respecting its value, not only to himself but to some others whom he had supplied with it, I was induced, not until about a year ago, to prescribe it in a few cases, and subsequently gave it a systematic trial on a large scale, both in hospital and in private practice.

"The form I have adopted has been uniformly the same. One ounce of the dried and cut stem is infused in a pint of boiling water for an hour. The liquor removed by straining has been given, unmixed with any other remedy, in quantities varying from twelve

ounces to a pint during the twenty-four hours, in several doses. The taste of the infusion is rather agreeable than otherwise; it produces no nausea or derangement of the stomach.

"From notes of the numerous cases in which I have employed it, making at the same time due allowance for the effect of other sources of benefit to the patient, I have arrived at the following conclusions respecting the indications for its use:

"In vesical irritability produced by inflammation of the prostate and neck of the bladder; in severe gonorrhœa, and especially when the inflammation extends backwards; in the pain and spasm caused by calculus and by aggravated stricture of the urethra, as well as in some cases of obscure disease of the bladder, the good effects of the infusion have been very marked, and it has proved far more efficacious than the buchu, which may fairly be esteemed the most widely applicable and generally useful of our officinal remedies of this class in such circumstances. In cases of prostatic enlargement in elderly patients it has been of service, but less frequently than in the conditions above named. It has also afforded great relief in renal calculus. A medical man practising in London, who has thus suffered, and very severely, during many years, tells me that 'after trying every approved remedy, it is the only thing that has rendered life endurable.' This is one of four similar cases in which it has been more or less useful.

"In short, wherever micturition is very frequent or painful, depending on hyper-sensibility of any part of the urinary passages from acute or subacute inflammation, with signs of its presence in the urine itself, the symptoms are most materially relieved, and the urine becomes clearer. If improvement is produced at all, it is generally very soon after commencing the medicine, and if none can be observed in four or five days it is not worth continuing to employ it.

"I believe it is important that the plant should be gathered in the spring, shortly before the leaves appear; the stem is then to be slowly dried without artificial heat and cut into short lengths for use. The infusion obtained from material so treated is superior to that made from plants gathered indiscriminately at any time, and, also, to the infusion made from the *Triticum repens* which is imported by the herbalists for the purposes of French pharmacy in this country."

ART. 119.—*On the immediate treatment of Stricture of the Urethra.*
By Mr. BARNARD HOLT, Senior Surgeon to the Westminster Hospital, &c.

(*Medical Times and Gazette*, Oct. 19, 1861.)

"My attention," says Mr. Holt, "was early attracted to the prevailing defects in the treatment of strictures. I could not but observe the tediousness of the treatment by ordinary dilatation, occupying many months before an average instrument could be introduced into the bladder, and that even when the dilatation was accomplished, the

constriction generally returned, so that perpetual surgical care was required.

"Being deeply impressed with the unsatisfactory nature of the prevailing methods of curing these distressing maladies, about seven years ago I adopted a more energetic mode of treatment, and invited the notice of the profession to a new 'stricture dilator.' Its use was at first limited to simple dilatation, which was readily effected by graduated tubes passed between the blades without the withdrawal of the original instrument. Experience, however, soon showed me that, as a general rule, when dilatation was carried much beyond the degree produced by ordinary bougies 'stricture fever' was induced. I therefore determined, though with some apprehension as to the consequences, to *split the stricture* by passing the largest sized tube at once, and thus immediately to enlarge the contracted part of the canal, so that it might receive a catheter equal to the entire breadth of the urethra.

"Fearing the effects of the urine being permitted to come in contact with the laceration thus occasioned, I kept a gum-elastic catheter in the bladder, but as this measure gave rise to considerable irritation, I determined to content myself with simply splitting the stricture, drawing off the urine, and not again using the catheter till two days after the operation. After that interval an instrument of the same diameter as that used at the time of the operation was again employed, and its use was continued, first on alternate days, and subsequently at longer periods of delay.

"The course of experience has shown, indeed, that instances occur in which it is necessary to use a catheter one size less than that first passed after the operation, but such cases are exceptions. The instrument by which this simple process is accomplished consists of two grooved blades fixed in a divided handle, and containing between them a wire welded to their points, and on this wire a tube (which, when introduced between the blades, corresponds to the natural capacity of the urethra) is quickly passed, and thus ruptures or splits the obstruction. The simplicity of this apparatus is obvious to all, and the history of above a hundred cases proves that its use is unattended with any of those serious complications—viz., hæmorrhages, false passages, infiltration of urine, perinæal abscess, fistulæ, swelled testis, &c.—which too often accompany the other operative process devised for the relief of these organs. The forcible distension caused by the dilator affects the morbid obstruction only; the healthy portion of the canal is not disturbed, the slightly vascular character of the strictural deposition and resisting tissue gives rise to but very inconsiderable bleeding, and the subjacent adventitious texture perfectly obviates infiltration into the surrounding cells."

Mr. Holt then relates several cases occurring in hospital practice, and watched from beginning to end by many students and medical men, which justify him in arriving at the following conclusions:

"1. The operation is of the most simple kind, and any one who can pass a bougie through a difficult stricture is competent to perform it.

"2. It is not attended with hæmorrhage, infiltration of urine, abscess, or any serious local mischief.

"3. In the majority of instances the relief is immediate.

"4. The occurrence of rigors or any other constitutional disturbance is very rare, and the patient is seldom confined to bed longer than from twelve to twenty-four hours.

"5. The urethra is immediately made permeable by a catheter of full size, which may be ever afterwards passed at discretion.

"6. This method is available in every kind of stricture where a canula of any size can reach the bladder.

"7. When the after treatment is judicious and attentive, the full capacity of the passage is always maintained.

"8. In all cases of neglected treatment the stricture yields to this method more promptly than to any other.

"9. It being impossible that any but the diseased tissue can be divided, the splitting of the stricture has a decided superiority over any cutting operation.

"10. And to sum up the great advantages in one proposition, the process is facile, speedy, prompt in effects and free from every danger, immediate or remote. The course of general treatment will naturally vary, according to the kind of obstruction, the number of strictures, and the occasional complications of contracted bladder, enlarged prostate, fistulæ in perinæo, false passage, &c. In simple stricture, however narrow, the relief will be immediate, but in the more complex forms of these maladies the size of the stream is not so directly increased, as might have been anticipated, from the immediate enlargement of the canal. Notwithstanding, however, the stream may for a short time remain somewhat restricted, the patient is able to empty his bladder much more quickly and effectually, and has less frequent micturition. The limitation of the jet evidently depends upon the thickening of the surrounding textures and swelling of the mucous lining; these morbid states speedily subside, and in a short space of time the patient can void his water in a normal manner." * * *

"The method of performing this operation may be described in a very few words. The permeability of the canal having been once satisfactorily ascertained, the size of the meatus of the urethra is to be gauged by passing into it a sound that will conveniently fit, and the number of the sound so used is to be the number of the tube to be passed: this is important to ascertain, so that the urethra may not be stretched beyond its natural limits, for while the urethra of one person will admit a No. 14, another will not admit more than No. 9.

"The dilator having been previously well oiled, is to be introduced with the handle somewhat over the patient's left hip, and by keeping the convex portion gently pressing against the under part of the urethra, the point will glide along the upper portion until it is fairly beyond the triangular ligament, when, by bringing the handle to a right angle with the body, and gradually depressing it—but not so much as in the passage of an ordinary catheter—it will usually slip into the bladder; in fact, the same proceeding is to be adopted as in introducing a lithotrite for the purpose of crushing a calculus. Having reached the bladder, the dilator should be gently rotated, to prove that it is fairly within that viscus, and being thus assured, the

surgeon is now to place the point of the tube he had previously selected upon the wire between the blades, and thrust it quickly onwards to the end. The stricture being now fairly split, the dilator should be rotated, to still further separate the tops of the rent, and be then withdrawn, a catheter corresponding to the number of the tube being substituted for the purpose of removing the urine. The catheter is now to be taken out, and the patient sent to bed, with directions to take, every four hours, for the first day and night, a mixture containing in each dose two grains of quinine and ten minims of the tincture of opium. The facility with which this proceeding can be effected will of course depend upon the kind and number of the strictures, and the existence or otherwise of false passages or fistulæ in perinæo. The urine being withdrawn, the patient does not require to pass water for some hours, and when compelled to do so the stream is usually larger, and the urine passes with greater facility than before. On the second day from the operation the same catheter should be gently introduced; but if the patient complains of much scalding, it will be better to take one size less. This should be repeated every other day for a week, when the larger one may be substituted, and the patient be taught to pass his own instrument. Of course the time occupied in the after treatment must vary with the nature of the case, and in the more obstinate forms necessitates the employment of the catheter for some time, the intervals being gradually increased until it is not required to be used more than once in three, four, or six months, and in most instances not more frequently than once a year. The bowels should be relieved by a dose of castor oil taken early on the morning of the operation, and the patient should be directed not to pass water for two or three hours previously, in order, first, to facilitate the introduction of the dilator, and second, to permit its free movement in the bladder.

“Out of so large a number of cases in which this instrument has been employed instances have occasionally occurred where the after treatment has been greatly neglected, and the patients have presented themselves again. In these cases it has always been found that the calibre of the urethra may soon be restored by the dilating power of the instrument, without again resorting to splitting, the uniting medium yielding much more easily than the structures which formed the original stricture.

“In conclusion, it may be stated that the dilator is not only capable of splitting a stricture, but it affords the most effectual means of dilating it to any extent that may seem advisable to a prudent surgeon. All practical surgeons know the difficulty of passing a second catheter through a difficult stricture. This is entirely obviated by the use of the dilator, which, being once introduced, is capable of either dilating the obstruction by the employment of a succession of tubes, or splitting the stricture by the passage of the largest tube at once.”

ART. 120.—*On Incisions for Stricture compared with Dilatation.* By Mr. JOHN GAY, Surgeon to the Great Northern Hospital.

(*British Med. Journal*, June 8, 1861.)

"I believe, with Mr. Syme," says Mr. Gay, "that a stricture, not of traumatic origin, rarely if ever becomes impenetrable to a skilfully plied bougie or catheter (I invariably use the catheter); and, moreover, that when once passed, the catheter, if its use be steadily and cautiously persisted in, and combined with appropriate general and local treatment, such as leeching, opium, steel, &c., will ensure as complete a cure as can be effected by any other known means.

"The advantage of this method over external division is its comparative freedom from risk; and I cannot but regard the argument in its favour as irresistible when we come to reflect that, out of every hundred, according to received tables, on whom division has been practised, six individuals have perished. This rate of mortality would be insignificant if the disease itself were mortal; which is not the case at that period of life in which such a procedure could for a moment be justified; or, perhaps, if there were an equivalent in the number of actual cures, which Mr. Thompson's tables do not, in my opinion, show. It is true, that strictures do occasionally reach such a pass as to lead their sufferers to 'protest that life is no longer desirable;' still, I cannot think that such a protestation, independently of some killing circumstances about the disorder itself, becomes, in any case, an admissible plea for an experiment in the shape of a possibly fatal operation.

"It may have been observed that I do not exclude external division from the list of stricture remedies, believing with Mr. Thompson that the real aim of the surgeon should be to 'utilise all;' but I do object to that estimate of the operation according to which it is regarded as a simple, safe, and effectual method of cure; and is, in consequence, adopted, as I have much reason to believe it still is by some, without either that regard to necessity or that amount of caution which should ever be observed when life hangs on the issue.

"Of the simple internal incision recommended by Mr. Thompson, I have had no experience; but, when confined to the constricting band or tissue, I can see no objection to it; believing that whilst, on the one hand, it can do no harm, it is very likely, on the other, to relieve congestion, inflammation, or irritability, and efficiently to prepare the way for what, in the end, will still be the 'wedge' in the treatment, namely, persistent dilatation.

"I come now to speak of dilatation, having long adopted Sir Charles Bell's view, that 'the permanent cure of stricture is to be accomplished by dilatation . . . by such a stretching of the narrow part of the canal that it grows large under the operation, and has no disposition to contract.' ('Institutes of Surgery.')

'I speak from some considerable experience, and that of the treatment

of the worst forms of stricture, when I say that I have very rarely met with a case that has not been amenable to the use of the catheter, with such adjuvants as opium, leeches, steel, &c., when especial circumstances demand them.

"Space forbids my treating of different kinds of strictures in detail, or their pathology; but it must be remembered that that idea of an urethral stricture is miserably imperfect which reduces it to the simple narrowing of the passage. A stricture is a structural lesion: and is not only the consequence of some disorder of the urethral tissues, but becomes itself the centre, and, perhaps, the seat of disorders specifically its own, such as inflammation, congestion, hæmorrhage, spasm, &c. And it is most constantly the case that the patients suffering from stricture do not become conscious of its existence, or at least do not awake to its importance until their attention is drawn to it by its having called into painful activity one or the other of these accessory forms of disease.

"It is not, then, the stricture *per se*, except in urgent cases, that should first claim the surgeon's notice, but its incidental affections; and all mechanical treatment should be withheld until these are brought under control by appropriate management, or, if the delay can be borne, altogether overcome.

"The most general causes of failure in the use of the catheter are, as far as I have seen—1, its inopportune employment; and 2, impatience. To the first I have just alluded. With regard to the second, I should say that in no case should the catheter be used with any but the slightest force; and this should not be persisted in but for a very short time. It is better to make several efforts at intervals of one, two, or three days, than overcome the resistance of a stricture by one effort, if that should necessarily be a violent one, and such as would lacerate or do other injury to the urethra. Gentle and regularly repeated efforts will eventually ensure success in, I believe, the most aggravated cases. I am in the habit of observing two rules when attempting to pass a catheter through a stricture, of the greatest service—1. Invariably to keep the convexity of that part of the catheter between the curve and the point well back against the posterior wall of the urethra, the point being tilted slightly forward and upward at the same time by a finger commanding the handle side of its curve; bearing in mind the anatomical relation of the urethra to the pubic arch, as it passes through the triangular ligament. And 2. To desire the patient at the same time to make an effort to void his urine, whereby all resistance to the introduction of an instrument, on the part of the extrusor or detrusor muscles of the urethra is overcome, and a channel, though ever so small, is, of necessity, formed.

In passing, I might remark that this is an invaluable test of the *existence* of stricture, especially in young subjects.

After the catheter has once passed through the stricture it does not follow that it will be admitted on subsequent attempts. These may fail from many causes, and may fail even again and again; but, after a time, the failures will be less signal, until, at length, they cease altogether.

"There should never be a hurry to substitute a larger instrument for one that passes. Sometimes a small instrument will dilate, and that with permanency, more quickly than a large one; although, on many accounts, the latter is preferable to the former in the generality of cases. I am assured that, by the gentle but patient and persistent use of catheters, well adjusted, as far as their size and shape are concerned, to the capacity of the strictured passage, and to the normal or abnormal course of the urethra in its entire length, most strictures can be overcome, and the urethra restored to its original condition, with as much security against relapse as by any other plan of treatment that has hitherto been devised, and with less risk of injury to the patient; and that the call for the knife is exceedingly exceptional."

ART. 121.—*On the treatment of Gonorrhœa.* By M. CULLERIER.

(*Journ. de Méd. et Chir. Pratique*, Aug., 1861.)

M. Cullerier prefers balsamics in large doses to injections in the abortive treatment of acute gonorrhœa. When pain is absent or unimportant, and the discharge has not yet assumed a muco-purulent character, he prescribes—

R Bals. Copaivæ, ʒv;
Pip. cubebæ, ʒiv;
Ess. Menth., m j.

F. S. A.

An electuary to be taken in the course of the day.

In the course of four or five days the symptoms yield and the discharge diminishes or ceases altogether; the treatment must on no account, however, be discontinued, but should be strictly persevered in for several days after the cure has been effected. If the balsamic remedies were laid aside too soon, a relapse would most probably take place, but the doses may be progressively reduced. Should this treatment not induce improvement in five or six days, it is useless to persist in the method. Many practitioners hold a contrary opinion, but M. Cullerier professes that if balsamics do not prove rapidly efficacious, they merely keep the inflammatory action within bounds, without checking it.

When gonorrhœa has lasted longer, and the inflammation is active, the pain acute, and the discharge copious, thick and greenish, and especially when the secretion is mixed with blood, balsamics irritate the stomach without any compensation. It is then proper to resort to antiphlogistics, viz., diluent and diuretic drinks, frequent and protracted bathing, mild laxatives, and if necessary leeching.

Erection is sometimes more painful than emission of urine. Lotions with cold water, pure, or containing a small quantity of acetate of lead, are then most beneficial; camphor is a trite but effective auxiliary, which M. Cullerier associates with opium thus:

R Camphoræ, ʒss;
Ext. Opii, gr. xv;
Mucilaginis, q. s.

T. S. A. Divide in pilulas 20.

One or two of these pills should be taken at bedtime.

It is also requisite, to remove this distressing symptom, to sleep on a hard bed.

When the acute stage has subsided and micturition ceased to be painful, M. Cuillerier prescribes copaiva and cubebbs, after having prepared the patient for a few days by the exhibition of syrup of tolu, of fir-buds, or tar-water.

When balsamics have definitively failed in effecting a cure, astringent injections are resorted to.

The following are M. Cullelier's favorite prescriptions in hospital :

R Zinci sulphatis,
Plumbi superacetatis, } à gr. xv ;
Aquæ, ℥iv.

Or

Aluminis, ℥iss ;
Aquæ, ℥iv.

Or

Acidi Tannici, gr. viij ;
Aquæ, ℥j.

Two injections are performed daily, after passing water.

Injections of tris-nitrate of bismuth are frequently most serviceable in obstinate cases. MM. Caby, Mourlon and Martenot de Cordoux have recorded several cases which speak well for the utility of this substance, even in acute gonorrhœa. In the chronic form of the disease M. Cullerier has also prescribed it with advantage. He conceives that the bismuth acts merely by its interposition between the inflamed surfaces, and should therefore be used in large quantities, as recommended by M. Mourlon, viz., from half a drachm to one ounce for seven ounces of water. The mixture should further be prepared at the time only when it is needed, and the salt should be washed until it ceases to redden litmus paper.

(C) CONCERNING THE UPPER EXTREMITIES.

ART. 122.—*New method of treating long-standing Dislocations of the Scapulo-clavicular Articulation.* By Dr. E. S. COOPER, Professor of Anatomy and Surgery in the University of the Pacific.

(*American Quart. Journ. of Med. Science*, Jan., 1861.)

The difficulty of effecting a cure even in recent cases of dislocations of the scapulo-clavicular articulation without deformity is well known, and in those of long standing treatment has heretofore seldom, if ever, been attended with complete success.

! [This joint admits of the smallest possible degree of motion appertaining to any joint in the natural condition, and the plan of treatment now to be explained is based upon the supposition that a bony union between the end of the clavicle and acromion process of the scapula could confer little or no inconvenience, and would at the same time remove the deformity.

CASE. —Mrs. M. A—, a native of Wales, æt. 36, mother of several children, consulted me in 1856 for a dislocation of the acromial extremity of the left clavicle of several years' standing, which had impaired the usefulness of the arm of that side to a very great extent. She had consulted several surgeons in Wales, one of whom used compression upon the elevated extremity of the clavicle for several months without avail. Two years afterwards she consulted some of the most eminent surgeons of London, but without receiving any permanent benefit, though she wore an apparatus recommended by one of them for several months. Subsequently coming to the United States, she consulted different surgeons, none of whom, however, advised any effort to be made to remove the deformity. She had a nervous desire to get rid of the deformity, amounting almost to insanity, and entreated me to do something for her. I proposed cutting down upon the bones, drilling them, and applying ligatures of metal to hold them together. To my surprise she accepted the proposition, not only with promptitude but apparent enthusiasm. All the supposed danger of admitting air to bones was fully portrayed to her, as founded upon the authority of the greatest practitioners for hundreds of years, but all had no effect. Her husband and herself would take all responsibility, she said, bearing in mind an operation which had been performed upon her nephew, where metallic ligatures were applied to the tibia, and to which the husband consented. Although from my experience with ligatures applied to bones I confidently calculated upon success in the case, it was desirable to have the parties fully informed as to what others would say should any untoward result follow, against which we cannot safely guarantee in any operation, however simple, and which is liable to fall particularly heavy upon the surgeon who performs an experimental operation upon principles opposed to the opinions of the profession.

The operation was commenced by making an incision three inches long, commencing a little external to the border of the acromion process of the scapula, and following the direction of the clavicle. A transverse incision of two inches was next made, passing over the elevated extremity of the clavicle. The flaps were then dissected away, the bones exposed, their articulating faces trimmed with the bone scissors, and then bored with a drill one line and a half in diameter, about half an inch from the articulating surfaces. The drill was passed through obliquely from above in either bone, the end of the drill being directed towards the opposite one. A wire one line in thickness, made of virgin silver, was then introduced, and a firm knot formed by twisting the ends together immediately over the articulation. Two healthy bony surfaces being brought together and held firmly there, I calculated most confidently upon a speedy osseous union, which turned out to be the case. Considerable difficulty was encountered in passing the wire from one bone to the other. By having the end well sharpened, however, and bent, after several trials it was passed through the holes in the bones.

The after treatment consisted of applying a piece of lint wet with an evaporating lotion (composed of one part of alcohol and ten of water) in the wound around the ends of the wire, which were then bent down over the margin of the wound, over which was placed a piece of wet lint. A roller was then applied over the arm and shoulder of that side as tightly as the patient could conveniently bear. The dressings about the wound were kept constantly wet with the evaporating lotion for four days, when they were removed and a poultice applied, after which the wound granulated kindly, and without an untoward symptom the patient recovered perfectly, without deformity. At the end of six weeks the wires were untwisted, one end cut off by passing the bone scissors down to the side of it nearly by the bone, when

the other end was readily withdrawn. As soon as the wound began to suppurate freely a movement of the wire was commenced by carrying the ends back and forth. This was done for the double purpose of keeping the wound slightly open for the discharge of any spiculæ of bone which might be thrown off, and which not unfrequently occurs in all operations upon the bones, and for facilitating the final removal of the wires. The motion of the arm is as good as ever, and at the end of nearly three years there is no indication of a return of the deformity.

ART. 123.—*An useful Arm left after the removal of the entire Scapula.* By Dr. —.

(*Dublin Med. Press*, Nov. 13, 1861.)

So complete and rapid was the recovery of the use of the arm in this case that the patient was able to enter the army as bugler in the Artillery corps within the space of a few months from the operation. Unfortunately, the name of the operator, and the title of the journal in which the case was first published, are omitted in the journal from which we borrow our account.

CASE.—E. Messiek had enjoyed uninterrupted good health till December, 1859, when, after exposure, he was attacked with double pleurisy, confining him to his bed in the Albany Hospital for a month. While thus affected, pain in the right shoulder, with swelling and inability of motion, set in, the least jarring producing exquisite pain. Under a variety of treatment an abscess at last formed over the scapula, which was opened in March, 1860, in three places, twice over the scapula and once under the arm, discharging a large quantity of offensive pus, with temporary relief of swelling and pain.

The wound having been closed after the expiration of eight weeks, a fistulous opening only remaining in the site of the original wound, he left the hospital and went to the country, hoping to recover under the genial influence of pure air. But failing to find permanent relief, the shoulder again having increased in size, with return of pain, the fistula constantly discharging, he entered my hospital in December last, his case then offering the following symptoms:—The posterior face of the shoulder over the body of the scapula greatly swollen; the skin traversed by enlarged veins; great pain at the seat of swelling, extending down to the fingers, aggravated by pressure. The articulation of the humerus in front and at its outer face tumefied and painful, the natural contour of the joint being effaced. There is a fistulous opening at the posterior border of the axilla in the middle of the scar left after the incision, into which the probe passes freely outward, and in front of the scapula, to the extent of several inches.

Convinced by the history of the case and examination that necrosis had attacked the entire scapula, chloroform having been administered, an incision was made from near the acromion process, transversely along the spine to the posterior edge of the scapula, and another from the centre of the first directly downward to near the angle, transversing the skin and muscles down to the bone. The flaps thus formed were reflected, the acromial end of the scapula was next cut through with pliers, and the neck of it with the chain saw. The whole body of the scapula was then enucleated out of its periosteal investment, which was found much thickened and only loosely connected with the bone. Free venous bleeding followed from the bottom of the wound; the subscapular artery having been cut, required ligature, torsion arrested

bleeding from several smaller arterial branches. The bone thus enucleated was found roughened on its surface, and thickened from long deposit within its substance, of brawny colour, excavated by caries along its inner border from the neck obliquely down and outward to near its angle, from whence exfoliation had taken place previously at different times. The flaps having been replaced, were united by several iron-wire sutures, a pledget of lint having been placed in the lower angle of the wound for facilitating the subsequent discharge. The arm was bound lightly to the chest, cold-water dressings were applied, and hot coffee administered, the pulse and temperature of the body being greatly lowered by chloroformization. A full anodyne was given at bedtime, with Sulph. Quin. gr. ij every three hours, as a prophylactic against surgical fever. Vomiting, the effect of chloroform, continued for two days, but reaction was moderate, and suppuration set in timely and duly. Sulphate of quinine and morphia were continued, the cold-water dressings being replaced by linseed-meal poultices. On the fourth day the patient began to leave his bed for a short time, which he quitted after a week. He left the hospital five weeks after the operation, the wound being entirely closed, with the exception of a fistula near the neck of the scapula, from which some pus was discharging.

Not having heard from the patient since his leaving my hospital, I was agreeably surprised to see him in August last in this city, in military dress, having returned, as he stated, from the field of battle at Bull Run, where he had been engaged as a bugler. On examination of his shoulder I found the wound firmly closed; in place of the resected scapula there was a degree of fulness and firmness, leading to the belief that the periosteum had thrown out new bone in place of the enucleated scapula. The motion of the arm was surprisingly free in every direction, the limb itself having regained its former fulness and strength.

ART. 124.—*On a new mode of reducing Dislocation of the Shoulder-joint.* By Dr. N. R. SMITH, Professor of Surgery in the University of Maryland.

(*American Quart. Journ. of Med. Science*, July, 1861.)

The plan recommended is to make counter-extension from the opposite wrist—an expedient directly at variance with the commonly received principle, because remote from the bone to be supported. The continuity of ligament, bone, and tendon, by which the two scapulæ are bound together, induced our author to adopt this method as the most efficient to secure the immobility of the scapula. In some of the first cases he placed the patient in a chair, and directed two strong persons to make steady horizontal traction from the two wrists; as soon as the spasmodic resistance of the muscles was overcome, the head of the bone was disengaged, and the muscles which help us in such cases suddenly lifted the head into its place.

This method causes no appreciable pain, but rather relieves the suffering of the patient caused by the pressure of the head of the humerus. If there be unusual muscular development, or the dislocation be of long standing, says Dr. Smith, "I place the patient in a chair, sitting a little on one side of it, so as to allow room on the side of the injury for the operator's foot. I then pass a piece of stout muslin, folded, around the chest, and under the axilla of the injured

side. The tails of it I carry horizontally to the opposite side, one in front, the other behind, and extending the arm horizontally, bandage them firmly to the wrist of the sound side, leaving the ends projecting to be well secured to the wall or other unyielding substance. I then pass an ordinary roller over the top of the injured shoulder, and back and forth, twice under the muslin band, to prevent its slipping down. Then I continue the same roller under the bottom of the chair and over the shoulder three or four times. This helps to give steadiness to the scapula, and especially to prevent the involuntary rising of the patient from the chair, or the tilting of the scapula upwards, when it is necessary to make the manipulation of which I am to speak. I now attach the extending band to the wrist of the injured side." After defending at some length this step of the operation, Dr. Smith concludes by directing extension to be made by two persons, outwards and a little downwards, gradually raising the arm to a little above the horizontal direction. The force may be gradually increased and continued until the muscles become fatigued and finally relaxed, when the head will often slip into its place without resort to manipulation. When this does not occur after the lapse of a reasonable time, the surgeon is to place his knee in the axilla and manipulate according to the common practice, the extension being continued. When the head is under the coracoid, the procedure is nearly the same, traction being made a little more backwards and upwards. Of dislocation upon the dorsum of the scapula, he has seen but one case so recent as to justify the attempt at reduction. In this case he failed in the method usually recommended. "I then carried a band over the front of the shoulder, one tail under the axilla, the other above it. These I united, carried them backwards and inwards obliquely, and secured them to the wall. Then I made traction strongly from the wrist almost directly forward, without much difficulty I thus drew the head of the bone forward over the margin of the glenoid, and had the satisfaction to see it slip into its place." When much resistance is expected, chloroform should be freely administered until relaxation is complete; less than this causes spastic rigidity of the muscles, and defeats the object.

ART. 125.—*On the reduction of luxation of the Head of the Humerus simply by manipulation.* By Dr. H. H. SMITH, Professor of Surgery in the University of Pennsylvania.

(*Med. and Surg. Reporter*, No. 19, 1861. and *North Amer. Med.-Chir. Rev.*, May, 1861.)

The method of reducing dislocation of the head of the humerus by elevation and rotation is not a new suggestion, but to Dr. Smith appears to belong the credit of having amended and methodised this plan of treatment. This plan does not require the use of an anæsthetic, provided the movements are made gently and slowly, so as not to induce fear or muscular resistance, and may be practised when the subject is sitting up, in which event the scapula requires to be steadied.

The manipulation for an axillary luxation is as follows:—Elevate

the humerus as much as possible, or, at least, to a right angle with the body, and flex the forearm at a right angle with the arm, so that the palm of the hand will present to the patient's abdomen. Then seizing the wrist with one hand, and the surgical neck of the humerus with the other, while the arm is thus elevated and the forearm flexed, use the forearm as a lever, and rotate the head of the humerus upward, outward, and backward, until the palm of the patient's hand looks upward, and a strong resistance to further rotation, caused by the tendon of the subscapularis, is felt. Then bringing the elbow slowly to the side, and keeping the humerus parallel with the middle line of the axilla, that is, not carrying the arm either toward the anterior or posterior portion of the trunk, *rotate* the head of the humerus upward and forward by reversing the motion of the forearm until the palm of the hand shall again look downward, bringing the elbow to the side during this latter rotation, when the luxation will be reduced with great ease to both patient and surgeon.

To reduce an anterior luxation, carry the elbow as far backward as possible, and elevate it so as to throw the head of the bone into the axilla, then treat as in an original axillary dislocation. For a posterior luxation, elevate the arm and carry it strongly forward, so as to make an axillary variety, and proceed as before.

The paper is illustrated by twelve cases, treated by this method, three being of the anterior variety, and the remainder axillary. One of the former was of three weeks' standing, and one of the latter of six weeks' duration. In about half the number anæsthetic agents were not employed.

ART. 126.—*A Case of Dislocation at the Shoulder-joint, successfully reduced twelve years after the accident.* By Dr. HUBBARD.

(*American Medical Monthly*, March, 1861.)

CASE.—Mr. Edward Tunstall was born September 8th, 1787, at Reinford, England; was injured in September, 1848, on the Liverpool and Manchester Railroad, by falling on the platform of Hayton Station. Having for a long time been affected with rheumatism in the shoulder, no attention was given to his case, and without professional advice he remained in this state, and came to America in 1856, and on the 4th August, 1860, I was called to visit him, and prescribe for him, for an attack of *pneumonia*. During my investigations I discovered that the shoulder-joint was dislocated upward and inward, under the clavicle, and upon inquiry found the particulars as above stated. I advised the old man to have it reduced, as his arm was almost useless; he had kept the shoulder-joint without motion, nearly the whole of this long time, by use of a sling; he finally consented, and on the 5th August I made the trial with Jarvis' adjuster, and succeeded in reducing the bone to its natural position, to the joy of himself and friends, and to my great satisfaction. It is now nearly six months since the reduction. He has the use of his arm as well as ever, except, he says, it is not as strong as the other.

ART. 127.—*On the pathological changes produced in the Shoulder-joint, by Traumatic Dislocation, as derived from an examination of all the specimens illustrating this injury in the Museums of London.* By Mr. FLOWER, Assistant-Surgeon to the Middlesex Hospital, &c.

(*Lancet*, July 1, 1861.)

Mr. Flower remarks that, as the specimens examined are mostly without history, it is important, before commencing this investigation, to ascertain whether it is possible to distinguish the effects produced upon the structures which compose the joint by disease from those occasioned by injury; many authors having described the results of various diseases as incomplete traumatic dislocations; while, on the other hand, conditions which could only be produced by external violence have sometimes been ascribed to pathological changes. Complete dislocation from disease of the shoulder-joint is, as far as our knowledge at present extends, an extremely rare circumstance, and consequently all cases in which the head of the humerus had fairly passed over the margin of the glenoid cavity were included as being probably of traumatic origin. So-called incomplete dislocations, and others which in their present condition afford no satisfactory information, were rejected. The particulars of forty-one specimens are arranged in a tabular form. Of these, in thirty-two the head of the humerus had lodged, and in most instances formed a new socket upon the anterior margin of the glenoid fossa or neck of the scapula, immediately beneath the coracoid process—a situation correctly designated “subcoracoid.” In only three examples was it found resting upon the anterior edge of the inferior costa, below the glenoid fossa—the situation which is assigned to it by Sir A. Cooper and other subsequent English authors, in the ordinary form of dislocation. There are four examples of the very well marked variety of dislocation backwards, in which the head of the bone is placed upon the posterior edge of the glenoid fossa or neck of the scapula, immediately beneath the posterior part of the acromion process. In one the head of the humerus was thrown upwards and inwards, and rested upon the stump of the fractured coracoid process. There is no specimen illustrating the “subclavicular” variety as defined by Sir A. Cooper, and which is said by some authors to be second in order of frequency. The long tendon of the biceps was very rarely injured, but the tendons attached to the greater tuberosity were ruptured in several instances, or the tuberosity itself was detached from the rest of the bone.

The anatomical characters of the most common forms of the injury are then described, as well as certain changes which take place in the contiguous extremities of the two bones when dislocations are left long unreduced—changes which deserve more attention than has hitherto been bestowed upon them, as they have been frequently mistaken for the evidences of the existence of partial or pathological luxations.

Lest the great frequency of subcoracoid dislocation observed in this series should give rise to any doubts as to the accuracy of the observations in the minds of those who are accustomed to the descriptions

of this injury given in the standard surgical works of this country, or should lead to the supposition that in these examples of neglected dislocation the head of the humerus had in process of time assumed a position which did not at first belong to it, the author mentions that in upwards of fifty cases recently observed in living patients, in a very large majority the bone could be distinctly felt immediately below the coracoid process, and that this has already been recognised as the typical position by most surgeons of the modern French school.

ART. 128.—*On Excision of the Tendons in Amputation of the Forearm at the Lower Third.* By MR. HUGH CROSKERY.

(*West Indian Quart. Journal*, Aug., 1861.)

"I communicated," says Mr. Croskery, "in the beginning of 1859, a short paper on this subject to the Surgical Society, in which I described 'a case of amputation of the right forearm at the lower third, in which the tendons were drawn down and divided an inch above their termination in the flaps; and I brought forward that case, in the hope that the great success which followed the plan adopted would induce others to make further trial of it, and to communicate the results of their experience of it to the profession. I performed this operation, for the first time, in October, 1858, and a short time after I had communicated it to the Surgical Society, Mr. Alford, surgeon to the Taunton and Somerset Hospital, operated in a similar way, and published the results in the 'Medical Times and Gazette' of Feb. 4th, 1860. In both these cases a useful limb was preserved, and the stump healed in a very short space of time. The subject of my case has been my own servant for the past three years, and he can use his handless forearm with wonderful facility.

"I have lately had further opportunity for testing the value of this mode of amputation, and I have now no hesitation in strongly recommending its general adoption. It is easily performed. Two flaps are made after the process of Verneale—the palmer by transfixion, and the dorsal by cutting in a semicircular course from the tegumentary surface, the flap being then dissected back. After the limb has been separated in the usual way and the arteries have been tied, the soft parts are drawn well back by an assistant, when the tendons will protrude. Each tendon is then grasped with the rasped blades of a spring-forceps, drawn out, and cut off on a level with the flap. The flaps, which should be two inches in length, of equal size, and with broad angles, are then brought together with sutures and adhesive straps, and a roller is carefully and evenly applied with the view to the obliteration of the cavities left by the retraction of the tendons. The bandage should be brought up as far as the edges of the flaps, and the face of the stump should not be covered by it, but merely dressed with wetted lint. The flaps will be found to adapt themselves accurately together; and to furnish all that is requisite for immediate union. The stump will be healed completely within three weeks, and the bones will be protected by a firm cellulo-integumentary cushion."

ART. 129.—*New procedure for the Ligature of the superficial Palmar Arch.* By Dr. BÜKEL.

(*Journ. de Méd. et Chir. prat.*, Sept., 1861.)

All surgeons are aware that the gravity of the wounds of this artery is entirely out of proportion with its size. The difficulty of checking the hemorrhage arises, on the one hand, from the fact that blood is supplied in almost equal quantities by the radial and ulnar arteries, and on the other, from the number of collateral vessels given off in so limited a space. Hence, it is almost impossible for a solid coagulum to form in the divided extremities of the artery. The superficial situation of the arch, in a region so exposed as the palm of the hand, accounts for the frequency of these injuries.

In general, pressure on the site of the wound and on the principal arteries leading to the hand is at first resorted to; but the abundance of secondary hemorrhage soon compels the surgeon to secure the radial, ulnar, or even the brachial arteries, a series of hazardous operations which might be avoided, were it possible to apply a ligature directly upon the extremities of the open vessel. This precept is however seldom complied with, on account of the loose description given by anatomists of the exact situation of the superficial palmar arch.

Dr. E. Bükel, fellow of the University of Strasburg, has recently published in the local 'Medical Gazette,' some new indications which may guide the operator in his search for this artery, and permit him to secure it without unnecessarily extensive incisions.

"Place the thumb," says Dr. Bükel, "in the greatest possible abduction, and draw a line from its ulnar edge across the palm of the hand. In front of this, which may be denominated the guiding-line, draw a second in a parallel direction, at a distance of a third of an inch nearer to the fingers, or more correctly at an equal distance between the first line and the middle cutaneous fold of the palm; this is the precise position of the superficial arch, and if the skin and palmar fascia are divided here, the artery will be at once exposed, and found reposing on a layer of fatty tissue which separates it from the nerves and tendons. No apprehension of wounding these need therefore be entertained.

"It will perhaps be alleged that no fixed rules can apply to an artery so irregular as the palmar arch; but it must not be forgotten that the anomalies alluded to refer less to the exact situation of the vessel, than to the dimensions of its supplying branches. I have performed the ligature above twenty times, on the dead subject, guided by these rules, and have never once failed in alighting on the artery in the exact position described.

"An accurate knowledge of this anatomical detail has another advantage quite as great as that of giving increased facility in finding the artery, viz., it supplies us with the means of avoiding it. Phlegmonous inflammation beneath the palmar fascia, at the same depth as the arch, frequently requires incision, which is never extended towards the wrist without a certain amount of hesitation. The indications

I have mentioned will permit the surgeon to use the knife with more boldness and at the same time with greater safety, and they have already done me good service for this purpose."

(D) CONCERNING THE LOWER EXTREMITIES.

ART. 130.—*A new method of treating Fractures of the Femur.*
By Dr. GORDON BUCK, of New York.

(*American Med. Times*; and *Dublin Medical Press*, July 17, 1861.)

At a recent meeting of the New York Academy of Medicine, Dr. Gordon Buck read a very interesting paper upon a new method of treatment for fracture of the femur. The long splint is entirely dispensed with, while constant and uninterrupted extension is kept up by means of a weight and pulley. The author makes no claim to originality for this method; it was suggested to him by observing its happy application by Dr. H. G. Davis, to the treatment of morbus coxarius.

The appliances to the limb itself for the purpose of making extension are the same as have been in use in our hospitals for several years past, and are as follow:—A roller bandage is commenced at the toes in the usual way, and continued to the ankles, where it is temporarily arrested. A band of adhesive plaster, two and a half to three inches broad, and long enough to allow the middle of it to form a loop below the sole of the foot, and the ends to extend above the condyles of the femur, is then applied on either side, in immediate contact with the limb, from the ankle upwards. Over this the bandage is continued as high up as the plaster. A thin block of wood of the width of the plaster, and long enough to prevent pressure over the ankle, is inserted into the loop, and serves for the attachment of the extending cord, which is fastened to an elastic rubber band (such as is used for door springs) that passes round the block. By this arrangement *elasticity* is combined with the extension. The limb is now prepared to be put under extension. The arrangement for the pulley is very simple. A strip of inch board three inches wide is fastened upright to the foot of the bedstead, and perforated at the height of four or five inches above the level of the mattress. Through this hole the extending cord is to be passed, and on the further side of the strap a screw pulley should be inserted at the proper level over which the cord with the weight attached is to play. The footboard of the bedstead, if there is one, may be perforated at the proper level, and the screw pulley inserted in the further side of it, so as to answer equally well. To allow the application of lotions to the thigh, during the first few days of treatment, the ends of the adhesive bands should stop short at the condyles of the femur, and be turned down. They may afterwards be replaced upon the thigh and the bandages continued over them, preparatory to the application of the coaptation splints which should be added at this stage of the treatment. The coaptation splints, which may be of the ordinary sort, should be secured by those elastic bands, like sus-

pender webbing fitted with buckles; these have the advantage of keeping up uniform concentric pressure as the limb diminishes from the subsidence of swelling. Counter-extension must be maintained by the usual perinæum band lengthened out in the direction of the long axis of the body, and fastened to the head of the bedstead. India-rubber tubing of three quarters of an inch calibre stuffed with a skein of cotton lamp wick makes an excellent perinæum strap. A piece of two feet long with a ring fastened at each end answers this purpose admirably. A thin wedge-shaped hair cushion, to raise the heel above the mattress, and a bag filled with bran or sand to place on the outside of the foot to prevent rotation outwards, complete the appliances requisite to carry out this method of treatment. There need be no delay in its application. The sooner after the occurrence of the injury the limb is put up the better. The contraction of the muscles is thus antagonized from the outset, and the rough ends of the fragments are prevented from fretting the soft parts.

The author gives twenty-one cases in detail where this treatment was employed; and the results, as shown by *actual measurement*, are equal to any that have hitherto been obtained. Dr. Buck claims for the apparatus the following advantages:—1. It maintains *uninterrupted* and *efficient extension*, without producing intolerable pain, excoriations, sloughing, and tedious sores. 2. It diminishes very materially the suffering of the patient and the irksomeness of long confinement to one position. There is no inconvenience attending the evacuation of the bowels. 3. It is cheap and easy of application. 4. It is not liable to become deranged, thus rendering it unnecessary for as frequent visits on the part of the surgeon as when the ordinary apparatus is applied. The author considers it necessary to apply coaptation splints, for reasons already given.

ART. 131.—*Simple Apparatus for Fractures of the Thigh.*

By DR. B. E. COTTING, of Roxbury.

(*Boston Medical and Surgical Journal*, Sept. 19, 1861.)

The difficulty of maintaining permanent extension adequate to prevent shortening of the limb, after a fracture of the thigh-bone, has been recognised by all surgeons. The great source of difficulty is the tendency to excoriation, or sloughing, in parts under pressure of apparatus. The groin or the perinæum and the ankle generally suffer most severely; so much so, that sometimes extension has to be abandoned, early in the treatment, to escape the evils of open sores in these parts. Then again, most kinds of apparatus are complicated or cumbersome, as well as costly, while the common single or Desault's splint is not easily managed well, and is rarely satisfactory. So that a simple contrivance, just the thing to secure the desired result, and at the same time capable of being got up extemporaneously on any sudden emergency, would prove a valuable aid to many a practitioner. The following is offered as an approximation to such a desideratum.

In the first place, a pelvis-band of stout cotton or linen cloth, strongly sewed, should be made to fit closely the pelvis and upper

part of the hips. Each individual may possibly require some special measurements, but such are not difficult. As a general rule, the band may be eight or nine inches in width, and long enough to surround the pelvis and overlap a few inches. To fit the prominence of the hips, a semi-oval "bias gusset" may be let in on each side at the lower and back portion of the band, beginning, on the lower border, two or three inches from the posterior median line. The length of this gusset may be about twelve inches at its free edge; and its greatest width six or seven inches. Its fulness may be such as to make the lower edge of the band five or six inches longer than the upper. Two pieces of cloth, with eyelet holes, metallie if conveniently obtained, should be firmly stitched at suitable distances on the front portions of the band. Two strips, or strong tapes, for securing the long side splint, or a pocket, if preferred, to receive the end of this splint; and a T, or perinæum strap, complete the pelvis belt.

When such a belt has been accurately fitted and properly laced to the pelvis, it will be found sufficient to sustain, without slipping, any amount of "counter extension" requisite. The strain will be uniformly distributed, and no part will be liable to excoriation. Even the perinæum strap, on which most of the strain comes in ordinary apparatus, will hardly be felt by the patient, and may be secured by a single toilet pin. It will be found quite useful, however, in adjusting the belt, and, from time to time, in guiding a bed-pan. A little attention to the lacing, and the perinæum strap, will keep the belt in proper position through even a prolonged treatment of many weeks.

In the second place, to obtain the required extension without injury to the ankle or foot, take a long cotton stocking, the thinner the better, and sew upon each side of the leg a strip of strong cotton cloth, which should hang free for a few inches below the foot. Cut off the tip of the stocking, that the toes may be exposed. Draw the stocking thus prepared smoothly upon the leg up to the knee, or even above it. Apply a thin roller bandage neatly and with uniform pressure from the foot to the top of the stocking. The several folds of the roller may be further secured in their places, if thought necessary, by a few stitches with a fine needle and thread. The bandage thus adjusted will retain the stocking in place for a sufficient time. But should the leg waste from long confinement, it is easy, without removing the first, to apply a second bandage, which will give all the security desired. Extension being made by the straps below the foot, the whole leg is brought down with the greatest steadiness, and without the slightest danger from undue pressure on any particular portion.

Such a belt and such a stocking Dr. Cotting has used for many years, in connexion with Flagg-Desault's, and other apparatus having foot or cross pieces, movable by screws or fitted with tourniquets, and he believes that they possess decided advantages over every other contrivance we have seen tried for the purpose. Moreover, the materials are always at hand, and are of speedy and easy application. But the splints alluded to are not always obtainable at the moment—nor are they essential. One simpler, and equally efficacious, can be readily prepared for the occasion. Take a strip of board two or three inches wide and four feet or so long. Make a hole near one end for the

pelvis straps. Cut an open mortice in the other end, ten or twelve inches long, and an inch or more wide. Fit a cross piece, nine or ten inches long, perforated by two holes for the introduction of the stocking straps, to slide in this mortice. The cross piece may be retained in position by a pin.

To reduce the fracture: having adjusted the pelvis band and the stocking, tie the upper portion of the splint to the band by the straps. Extend the injured limb and fasten the foot to the cross piece by the stocking straps. If any further extension be needed, the cross piece can be drawn down and secured in place by the pin.

Let us take a case, a real one. A surgeon is summoned to a distant patient (no uncommon thing in country practice), and finds, unexpectedly, that he has a fractured thigh to deal with. It is near nightfall. There is no time to return for apparatus, and he has none with him. By means of the contrivances described, he can soon put his patient into a proper and comfortable condition. While the women of the household are preparing, under his direction, the belt and the stocking, he seeks a suitable board, and with a common wood-saw and a pocket knife, if no better tools are at hand, prepares the splint and cross piece. A common nail answers for the pin. With these he soon has his patient, if not as presentable, at least in as artistic and effective accoutrements as if he had the resources of a hospital at his command.

For fracture of the neck of the thigh bone, the belt is often all that is necessary or advisable to apply. In such cases, the belt should be a little wider, and come down more over the hips. Extension of the limb should be made before lacing up the belt, and the perineum strap should be well padded and securely fastened. Suitable compression on the injured parts may thus be obtained, while the gusset will in a great measure prevent retraction of the limb.

ART. 132.—Case of Rupture of the Tendons of both Recti Femoris.

By Mr. ADAMS, Surgeon to the London Hospital, &c.

(*Lancet*, Aug. 18, 1861.)

Rupture of the tendon of the rectus femoris is by no means uncommon; it must have come under the notice of all surgeons of experience, and requires no special remark. But the rupture of the tendons of both recti is sufficiently rare to justify the narration of a case as illustrating some simple points of practice. The late Dr. Pereira, whilst descending the stairs from the library of the College of Surgeons, slipped, and ruptured the tendons of both recti. He was treated on strict anatomical and surgical principles, and was making a very good recovery, when he was suddenly seized with violent pain in his chest, and died in a few minutes, in consequence, as it was presumed, of the rupture of some large blood-vessel, or of the heart itself. The doctor was a large, fat, and bulky man, of great mental application; but he had neglected, by abstinence from exercise, the physical exertion necessary for the maintenance of the integrity of the muscular system. It is therefore probable that in his case the heart

and blood-vessels had undergone some important deterioration by fatty degeneration, and that a similar condition had pervaded his muscular system generally; for the injury was more especially to the recti muscles at a part where muscular fibre and tendon are intermixed. In the present case, however, there was no evidence to lead to a suspicion that the muscular system had undergone the change alluded to; and the fact that the rupture occurred close to the insertion of the tendons into the patella, rather militates against this idea, for Mr. Adams believes that tendons are free from this important change, and do not undergo the fatty degeneration so common to the muscular system of animal life.

CASE.—This patient is a man of sixty-three, remarkably strong and well built, and constantly habituated to a very fair amount of ordinary exercise. In appearance he might very reasonably have been thought to represent the age of fifty-five rather than that of sixty-three. He had been subjected of late to no especial disease requiring any remark. On the 11th of May he was standing at a chemist's door, hailing a cab to take him home, when, without any slip or stumble, he felt as if a bar of iron had struck him across and above the knees, and he was brought to the ground at once, being under the impression that some one had mischievously injured him. He was immediately conveyed into the chemist's shop, and was assured by the bystanders that no one had struck him. I saw him a few minutes after this; and at once recognised through his trousers the nature of his injury. He was carefully conveyed in a cab to his house in Portland Place, and placed in bed. I raised the heels upon a pillow, and, finding a perfect coaptation of the ruptured tendons by this simple process, I used no other means for maintaining the divided parts in apposition during the remainder of the treatment. Everything succeeded admirably; there was scarcely a line indicating the original division of the tendons; and, at the end of six weeks, an apparatus for the securing the parts was adapted by Mr. Pratt, a surgical machinist in Oxford Street, and my patient is now able to walk about his house, and to go up and down very steep stairs with the aid of crutches. When he first got down stairs, and whilst labouring under an attack of cold, we were somewhat alarmed by an attack of pain in his chest, attended with some hæmoptysis. Dr. Copland saw him with me, and assured him that it was only a simple attack of bronchitis, attended with bleeding from the mucous surface of the bronchi. The result has quite justified the opinion and the efficacy of the treatment adopted. Not a vestige of this condition now remains. I shall make no further remarks on the surgical part of the treatment of this case, except by directing attention to its extreme simplicity, and the consequent successful result. I may be permitted to express my most unqualified opinion that, in all cases analogous to the present, position alone will effect all that is desirable, and that bandages, so far from doing good, do an infinity of mischief.

ART. 133.—*Recurrent Fracture of the Patella twice treated successfully by Malgaigne's Hooks.* By Dr. JOHN H. PACKARD, of Philadelphia.

(*American Quarterly Journal of Medical Science*, Oct., 1861.)

CASE.—The first fracture, arising from a fall down a staircase, occurred on the 28th of November last; the hooks were applied on the eighth day, and were retained in place for thirty-one days. By the 1st of February, the

patient was walking in the street, and two months afterwards, as she subsequently told me, she could have waltzed as well as ever she could in her life.

On the 9th of April, Mrs. J—, the patient in question, sustained a strain of the left knee (the one previously injured), and on the 10th, catching her foot in the carpet, she felt something give way with a crack in front of the joint. She did not send for me till the succeeding evening, when I found the fracture evidently reproduced, the two portions of the bone being about three fourths of an inch apart.

For two or three days the limb was simply kept on a pillow, with adhesive strips so applied as to diminish the gap between the fragments. On the 14th, I placed it on a posterior splint, and on the 17th, I re-inserted Malgaigne's hooks, as nearly as possible at the same points as before. The pain caused by the operation subsided in a few minutes, a rag dipped in a mixture of equal parts of lead-water and laudanum being placed on the skin; and the patient lay in perfect comfort during the remainder of the day. At the end of twenty-nine days, the instrument was removed, without having caused any inflammation or irritation. But, whether from a want of due activity in the tissues, or from some other unknown cause, union was not so firm after this second fracture as after the first.

At the present writing, eighty-six days since the instrument was removed for the second time, Mrs. J— walks about with great ease, and with as perfect a sense of security as could well be expected in view of her past experience. When she goes up or down a staircase, a slight halt is perceptible, but otherwise she neither feels nor exhibits any abnormality of gait. The gap between the fragments does not exceed half an inch.

I would call attention to the fact, that when the bone gave way for the second time, it was with a sharp crack, and that when the finger was applied at the seat of injury, the separated fragments were not felt to be smooth and rounded, as if a fibrous bond between them had been ruptured, but abrupt, like those of a common fracture. From these circumstances, and from the closeness of the coaptation maintained by the hooks, my own belief is, that bony union had actually occurred. At all events, the issue of the second course of treatment could hardly have been rendered more successful under any other method of treatment.

ART. 134.—*Ankylosis of the Knee-joint forwards at a right angle.*

By Dr. J. A. GRANT, Physician to the General Protestant Hospital, Ottawa.

(*British American Journal of Medicine*, Aug., 1861.)

CASE.—W. D—, æt. 18 years, robust conformation of body, and never the subject of acute inflammatory rheumatism, at eleven years of age received a wound in the knee-joint from an axe, which grazed the bone over the inner condyle, wounded the proper membrane and gave exit to a principal part of the synovial fluid. At first no particular attention was paid to the wound. After the lapse of four days, it was placed under medical treatment. The joint speedily became swollen and very tender. The synovial capsule was distended with fluid and much distorted in appearance; limb semiflexed and considerable febrile excitement. The treatment consisted in leeching, with warm applications, moderate diet and occasional purgatives, the limb being constantly retained in one position by means of a Liston's splint; as the inflammatory symptoms subsided a more nutritious diet was prescribed, and

when pressure could be borne a proper uniform support was given to the joint; at the end of the tenth week he returned home, having derived marked benefit from the course pursued, and in a short time afterwards moved about on crutches with considerable ease and comfort. Up to the eighteenth month from the period of accident, the limb remained perfectly straight, the articulation possessing a very slight degree of mobility. All pain having subsided, even when using the limb, the various means of support were unadvisedly removed. As time rolled on the limb gradually assumed a bent position forwards, from an obtuse to a right angle. Thus, for a period extending over five years, this deformity was permitted to pass, without any means being adopted to counteract its advancement. Mr. D— was considered, in his section of country, a superior rider, in consequence of which his horsemanship was frequently called into requisition, so that, between carelessness and over-straining, the limb in its weak state was forced forwards into the position just mentioned.

This case came under my charge for the first time on the 17th of May, on which date he was entered as a patient in the General Protestant Hospital. A consultation of the medical board being convened, excision of a wedge-shaped piece of bone from the joint posteriorly, was decided upon as being most judicious; the parents, however, were firm in their resolve, in consequence of which, I was obliged to amputate at the lower third of the thigh, much contrary to my wishes. The operation was performed after the usual manner, and at the end of the fourth week cicatrization was complete.

Examination of joint.—The structures surrounding the joint appeared perfectly healthy, presenting no unusual induration or adhesion, excepting the alteration in the ligamentous connexion, which was entirely monopolised by extensive ossific deposit. The anterior portion of the condyles rested upon the anterior portion of the head of the tibia, the whole interspace posteriorly being filled up by perfect ossific deposit, possessing great strength and firmness, perfectly moulded and compactly set. Dimensions of joint considerably increased. Patella dislocated outwards and ankylosed to the outer surface of the external condyle. Head of fibula intact. During a period of at least two years, the limb has been sufficiently strong to support the entire weight of body, which was accomplished by bringing the foot downwards and backwards, at the same time flexing the sound limb almost to a right angle, thus forming, by this position of the limbs, a perfect quadrangle.

ART. 135.—*Case of Deformity of the Leg cured by Osteotomy.* By Dr. F. ESMARCH, Professor of Surgery in the University of Kiel, Holstein.

(*Medical Times and Gazette*, Sept. 14, 1861.)

CASE.—Emma M—, æt. 3½, a healthy, strong girl, from Hensburg, in Schleswig, was taken in on March 4th, 1860, for a considerable deformity of the left leg, said to have arisen without any known cause at a very early period of the child's life. The mother reported that, about six weeks after birth, she perceived two prominences on the front of the left leg. The medical attendant comforted her with the assurance that they would soon disappear. Nevertheless, as the deformity continued to increase, and the child in attempting to walk exhibited much lameness, she applied for admission into my wards.

On admission the leg was curved, as shown in Fig. 1. On its anterior surface were two large prominences, the upper of which, three and one eighth inches below the lower edge of the patella, arose from the tibia, which here formed posteriorly an angle of 125° ; the lower prominence, three and one eighth



inches lower down, and more external, sprang from the fibula, which here made an angle of 110° . As the bones could everywhere be felt through the soft parts, I marked their outlines with ink on the skin, as represented in Fig. 2.

No traces of rachitis were present, or had at any period existed. There could be no doubt that an undetected fracture of the both bones, since firmly consolidated, had caused the deformity; but nothing could be learned as to the time when this had taken place—*i. e.*, whether during the act of birth, whether the child had been overlaid, or allowed to fall.

Two modes of remedying this deformity suggested themselves, firstly by breaking the bones again, the child being under the influence of chloroform; or, secondly, osteotomy. The first plan seemed inapplicable to this case, as it would have been scarcely possible to break the two bones at the same time at their different places of curvature. I was encouraged to try the second by

the excellent results which Dr. Maier, in Wurzburg, and Professor Langenbeck, in Berlin, had obtained by it.

On March 8th, the operation was done in the following way:—The child being under the influence of chloroform, I made a half-moon shaped incision beneath the prominence on the tibia (the convexity being towards the foot), and formed a small flap, the base of which was rather above the place where I intended sawing through the bone. My intention was to procure through this incision a good covering for the sawn bone, and at the same time room for the use of the saw. After dividing the periosteum with a knife, I sawed through the tibia immediately below the prominence with a watch-spring saw, in a curvilinear direction from before backwards. The tibia was here unusually broad, owing to the formation of callus. I then made a similar flap over the prominence on the fibula, and sawed through that bone. I hoped by cutting the bones in a curvilinear direction to avoid removing wedge-shaped pieces. By lifting the lower concave end of the tibia around the upper convex end, I was able to place the bones in a straight position. But, in consequence of the resistance of the soft parts, the deformity immediately recurred, when I ceased my hold. As the muscles were perfectly relaxed by the chloroform, I conjectured that the tension could only be due to the shortening of the interosseous ligament, but did not dare to cut blindly into the deep parts, on account of the proximity of the posterior tibial vessels. I preferred removing a wedge-shaped piece from the head of the tibia, after which the leg was easily made to remain in a straight position. I also removed a wedge-shaped piece (quarter of an inch) of the fibula, as the lower end overlapped the upper when the leg was straightened. In order to keep the ends of the tibia well together, I bored holes obliquely through both ends, and passed into them a silver wire, and then fixed the surfaces of the bones firmly together. Both wounds were united with fine sutures, except their inner angles, which were left open for the escape of matter. No artery had required ligature. The leg was placed on a splint, such as I use for resections of the knee-joint, and the wounds dressed with strips of oiled lint, and ice applied over the lint.

On recovering from the chloroform, the child but for a moment complained of pain, felt very well the whole day, and slept as usual. In the course of the following day a sharp reaction came on, the temperature of the body was much augmented, pulse exceeded 180, sleep disturbed, head hot; still the child did not complain of pain, but was sometimes delirious. As the left pupil appeared larger than the right, I ordered a leech to the left temple, and a dose of digitalis. The child then became quieter, fell into a deep sleep, and on the following morning (March 10), when she awoke, the fever had decreased considerably, pupils were alike; the child made no complaint. On removing the dressing the wounds appeared unchanged, except that a little healthy matter discharged from their angles. The ice was continued, but the digitalis omitted.

March 11th.—The child was still better.

On the 12th, the temperature and pulse were normal. Her appetite was good and she had no pain. The wounds were almost entirely healed by first intention. Several sutures were removed without causing separation of the wounds.

The ice was discontinued on the 14th, but resumed the next day on account of acute feverish symptoms and more free suppuration.

On the 16th the remaining sutures were removed, but the suppuration continued, and the edges of the wounds gaped, which, I believe, would not have been the case if the ice had not been temporarily omitted.

On the 20th the ice was exchanged for lukewarm fomentations, the child

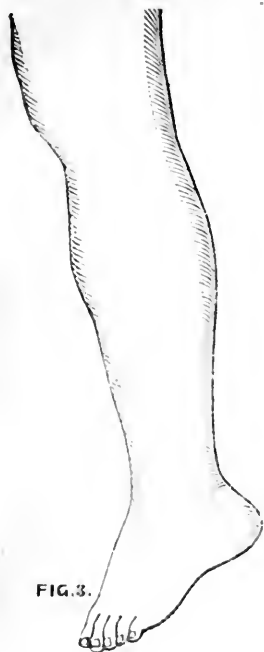


FIG. 3.

having had frequent chills. The wounds were now filled with fine granulations, the discharge decreasing daily until the 27th, when an increased flow was observed from around the silver wires. The wires were, therefore, removed without difficulty, when the discharge decreased. Although firm bony union had not yet ensued, the bones were well in position. Cicatrization was proceeding favorably.

On April 23rd, the leg was removed from the resection-splint, and placed in a simple, hollow, wooden one.

May 10th. — The wounds were almost entirely healed, when the child at night again became feverish and delirious.

The next morning a smooth plate of bone projected, and was extracted, and a few days later a similar piece, both of which seemed to come from the sawn ends of the tibia. The wounds now closed, and strong bony union ensued.

June 14th. — The little patient was dismissed from the hospital perfectly well, the leg was as represented in Fig 3. No difference in the length of the extremities could be detected on careful measurement; the child walked without support securely, and with no lameness.

ART. 136. — *Case of Compound Fracture and Dislocation of the Astragalus.*
By Mr. BRYANT, Assistant-Surgeon to Guy's Hospital.

(*Guy's Hospital Reports*, 3rd series, vol. vii, 1861.)

CASE. — A. M —, a commercial traveller, æt. 51, of robust frame, but of intemperate habits, was admitted into the hospital under my care on August 24th, 1859. A few hours previously to his admission he was descending from the roof of an omnibus, when he slipped and fell, with the whole weight of his body upon his right foot. The ankle then gave way outwards, twisting the sole of the foot in; and in that condition he was brought to Guy's. When I saw him, soon after the accident, I found the foot twisted inwards, with its inner margin looking upwards; a wound, two inches long, existed beneath the external malleolus, through which the lower extremity of the fibula projected; and hanging from the wound by a small piece of membrane was a large portion of the astragalus, including the whole of the upper and outer articulating surfaces; this was at once removed, together with two smaller pieces. The tibia and fibula were sound, no evidence of fracture existing. The vessels and soft parts, with the exception

of the wound, were not materially injured. The foot was readily restored to its natural position, and kept there by means of a posterior and lateral splint; the outer being an interrupted one, to allow of the application of lint to the wound. Ice was also applied locally, and opium administered internally.

Everything progressed favorably for some weeks; the wound healed, and the man's health appeared to suffer but little; on October 1st a small sinus alone existing.

On October 15th the foot became somewhat cedematous and inflamed, a collection of matter having taken place in the ankle-joint. A free incision into the part gave exit to a large quantity of pus, and the operation was followed by relief. Profuse suppuration, however, continued for some months, the man's powers being kept up by abundance of stimulants and good food; and on January 5th, 1860, the foot had so far recovered as to allow of the man leaving the hospital for change of air. At this time there existed one or two sinuses leading into the joint, and the foot was more cedematous than natural; but it was otherwise in a good position, and was firmly fixed.

On May 6th he was re-admitted into the hospital. His health had been completely re-established by his visit to the country, and the foot was more natural as regards its size; the sinus beneath the outer malleolus was still open, and through it some necrosed bone was readily detected.

On May 16th I cut down upon the part, and removed certain portions of bone. These were evidently portions of the fractured astragalus which had been left after the accident; a large cavity, lined with granulations, remaining. This rapidly closed in, and, with the exception of the discharge of a small piece of bone on June 16th, convalescence was not retarded, the man leaving the hospital on July 10th, convalescent. The sinuses had healed, and the foot was but little larger than its fellow. The ankle was firmly fixed, and the position of the foot was good; the only defect being some slight elevation of the heel, rendering the leg one inch shorter than the other.

On December 15th he was again seen, and with a good leg. He could walk tolerably well, and could without pain bear the whole weight of his body upon the limb. A high-heeled boot was ordered to be made.

On March last I again saw him. He could take free exercise upon the limb, without the slightest inconvenience, and was well pleased with the success of his case.

I have thought it well to place this interesting case on record, and had intended to have added some observations upon the fractures and dislocations of the astragalus; but the labours of Mr. Turner,* Mr. Pollock,† and Mr. Broca,‡ render such an act unnecessary, as in their interesting essays the chief points connected with these cases have been elaborately brought out, and the principles of treatment clearly laid down.

* 'Transactions of the British Medical Association,' vol. xi, p. 370.

† 'Med.-Chir. Transactions,' vol. xlii, p. 39.

‡ 'Transactions of the Surgical Society of Paris,' vol. iii.

ART. 137.—*A new form of Fungus Disease, principally affecting the Foot, and prevailing endemically in many parts of India.* By Dr. H. V. CARTER, Professor of Anatomy and Physiology, Grant Medical College, Bombay.

(*Trans. of Med. and Phys. Soc. of Bombay*, No. 6, new series, 1861.)

Several notices of this affection, as Dr. Carter shows, have appeared during the last twenty years, but none in any degree so complete as the present one, and none taking the same view of the fungoid character of the disease.

"Its distinguishing character," says Dr. Carter, "is the following: that certain *particles* or *masses* are invariably present in the structures implicated, besides being frequently found in the discharge. These I consider it correct to look upon as fungi principally from their structure; although their *habitat*—in the very textures, or parenchyma of the organ, and amongst sound parts—appears, to say the least, a very unusual one for fungi.

"There can be no doubt, too, that they are the exciting cause of the disease, and not merely accessory or secondary phenomena. With regard to one variety of the affection, now for the first time brought into notice and described, this is beyond all controversy, and everything is in favour of the other and more frequent variety having a similar relation to the symptoms."

External appearances.—Globose, or flattened form of swelling, often very considerable; never extending above the foot, it may be occupying only a part of it. Skin first studded with blebs or soft tubercles, marked with very numerous sinuous apertures, raised on the tubercles, or not. A thin discharge, often scanty and watery, and generally containing small granules or particles, either barely visible, or distinct, soft, and like to poppy seeds, or black in colour.

Sectional appearance.—General confusion of parts, owing to absorption of the bones, and fibrous thickening of the soft parts, both however occurring after some degree of method. Often the presence of granules, separate, or aggregated in mulberry-like masses of a yellow or brown colour; lodged in spherical cavities, excavated in the bones or soft parts, or in tunnels or channels leading from these cavities to the apertures on the surface, and also lined with a membrane: these granules are present in the discharge.

Sometimes there is a deposit of a fleshy (may be reddish or dark-coloured) substance, containing numerous minute particles (white or red) and occupying the same localities as the above-mentioned granular deposit. Lastly, in the same cavities and tunnels, we may find black granules; spheroidal, tuberculated masses of the same colour, and radiated in structure, which have been mistaken for melanosis, or blood-clots.

At a very early stage some care may be requisite in forming a diagnosis.

Tubercular or articular leprosy, elephantiasis, caries, strumous disease, malignant affections, or a combination of one or more of these diseases, may be enumerated as being most likely to be mistaken for

fungus disease, but it can be hardly necessary to do more than very briefly point out how they differ in appearance and structural change.

In *leprosy* (*tuberculosis*, or *articulorum*), the foot wants the above external characters: there is a progressive destruction of the parts by wasting or ulceration, or both; generally beginning with the toes; frequently numbness of the skin; very often the other foot is symmetrically affected, or the hands, &c.

In *elephantiasis* the above-named appearances are mostly wanting, the foot being more uniformly affected, and rather *puffy* at first; the leg is afterwards implicated.

In *caries* the form of the swelling may be similar at first, but its size and shape never equal or resemble those of the advanced stage of fungus disease; the sinuses are less numerous; granules in the discharge are absent.

Strumous disease is distinguishable in the same way as caries, there being generally present other complications or signs of the diathesis.

Malignant disease cannot be mistaken for this affection; the rapid growth, irregular swelling, absence of sinuses, &c., cachexia, &c., and many other signs, would prevent the error.

In this summary sketch only the external appearance is considered, for it alone is so characteristic that no reasonable doubt ought to exist, prior to operative procedure, if that be decided on. The appearance of a section, marked by the invariable presence of fungi, is even more characteristic.

In the following statement other features of the fungus disease are concisely noticed, and, as *compared* with other diseases, additional evidence is obtained of the foregoing conclusions:

<i>Fungus disease.</i>	<i>Other affections.</i>
Is endemic*	Hence differs from cancer, struma, &c.
Has a single local manifestation*	Hence differs from cancer, struma, leprosy, &c.
Is much more frequent in men than in women*	Differs from cancer, struma, and to a less extent, from leprosy, elephantiasis.
And during the middle periods of life*	This is more marked than in struma, cancer, &c.
Is not hereditary*	Differs from all these affections.
Is not accompanied by fever*	Differs from elephantiasis.
Or constitutional taint*	Unlike struma, cancer, leprosy, &c.
Is very protracted in duration	Differs hence from cancer.
Amputation is a cure	Not the case in cancer, struma, leprosy.

In those particulars marked by * this affection resembles the *animal* parasitic disease, *dracunculus*.

In addition, it may be added that a syphilitic taint is even rarely associated with the fungus disease, and that the aching, wearing pains, hectic, starting pains, and most marked features of constitutional exhaustion, are less evident in this affection than in those of a constitutional nature; the patient complaining of the weight, inconvenience, &c., of the foot, and finally sinking by diarrhœa. White patches on the skin are not uncommon, as in leprosy.

Proceeding thus by exclusion, it is concluded that it is *sui generis*; and that its characteristic and peculiar features, both in structure and

clinical history, are best explained on the supposition that a foreign body enters the part, and develops there; which phenomena are perfectly adequate to account for the symptoms. That this should be a *vegetable* growth was certainly *not* to be expected; but the case of the *guinea-worm* is almost parallel, and furnishes the evidence derivable from analogy.

Description of the fungus.—Dr. Carter describes two varieties:

The *first variety* appears in the form of globular masses, the size of which may be compared to a pin's head up to a bullet; their consistence is firm and friable, and their external surface of a deep black colour, and studded with minute tubercles which give the masses a mulberry appearance, on being magnified.

A sectional surface presents a radiated appearance, and is of a rich deep brown colour. Some of the masses readily break up along the course of these radii, and have then rather a softer consistence, like that of decayed wood; in other cases this disposition is not so apparent.

The general form is not in all cases perfectly spherical, sometimes one or more masses seem to have blended, or the growth has been irregular. The minute structure is as follows: The larger masses are composed of fasciculi, which radiate towards the surface in a very regular manner; they frequently branch and blend with neighbouring fasciculi; they appear somewhat knotted, and are cylindrical in form. Their peripheral extremities, and in some cases, the lateral branches, bear one or more dark-coloured terminal, globular, and very firm expansions, the varying size and projection of which give the tuberculated appearance of the exterior before alluded to. Their diameter was found in one specimen to range from $\frac{1}{120}$ in. to $\frac{1}{400}$ in., the globular dilatations are frequently $\frac{1}{200}$ in., or larger, in diameter.

The branching fasciculi appear to be chiefly fibrous in structure, being made up of very minute fibres which branch and inosculate, and are apparently homogeneous throughout; numerous granules are intermixed, and frequently a large, cellular, beaded fibre may be seen among these smaller ones. Such cellular beaded fibres form the great mass of the globular dilatations; they are seen of all sizes, branching and giving off inflated cells laterally, or ending in such: most are clear, some granular and nucleated. Irregularly interposed may be seen the spores. Diameter of fibres $\frac{1}{6000}$ to $\frac{1}{2000}$ in.

Such is the structure of those masses which are softer in consistence, and readily break up in the radiated manner described.

In other cases, the whole mass throughout is more friable, and appears to be made up of the beaded fibres so aggregated as to give the impression that the entire mass is built up of elongated cells regularly apposed. These are of equal consistency throughout.

It would seem that the *smaller masses* are nothing more than the clustered and dilated extremities of the fasciculi composing the larger masses, having become probably detached, or cast off from their external surface: in the very small granules (less than a pin's head in size) the place of detachment may be seen.

The general shape is highly lobulated, and flattened. Their structure is similar to that of the parts before described,—close-set, elongated, and branching cells forming fibres, radiating towards the surface and having interspersed amongst them, it would seem in greater abundance than before the detachment of the cluster, the cells which form the *spores*. These are oval, clear, or granular, with a spurious (?) nucleus, $\frac{1}{800}$ to $\frac{1}{2000}$ in. long diameter, thick walled, and frequently seen to be giving off prolongations which become beaded fibres: sometimes they appear to have been ruptured.

These black granules are found along with the larger masses, or by themselves, in some of the deep-seated sinuses; they form a characteristic element of the discharge from the sinuses, being thus conveyed towards the exterior. They are imbedded in a fleshy mass, presenting:—1. Myriads of small cells, some clear, compound, oval, dividing. 2. Numerous large granule cells (black), others light, round, or irregular. 3. A frame-work formed of what appears to be a close network of tubes, crammed in some places with large clear vesicles, or like blood-vessels. Fat globules and crystals abound.

Investing these curious and striking black masses, and lining the cavities in which they are lodged, is a rather tough fibrous membrane, somewhat adherent, particularly to the smaller particles. It contains numerous oil globules, is very soft and fleshy on its inner surface, and is prolonged towards the skin by funnel-shaped processes which terminate at one or other of the apertures seen on the external surface; structure obscurely fibrous with nuclei. The *mycelium* of this species is unknown, unless it be represented by the soft tissue in which the smaller particles are imbedded, which I am not prepared to deny, until a thorough examination of a perfectly fresh specimen shall furnish correct data for an opinion.

The fungi of the *second variety* are in all cases in the form of small, or even minute particles of a whitish-brown or pink colour. We may distinguish the following:—

1. Separate, light-coloured, particles, so minute that they are only just visible to the unaided eye: very numerous, and plentifully discharged from the sinuses.

When magnified, found to have a tuberculated exterior, and to be composed (apparently throughout) of very distinct and unmistakeable beaded cellular filaments, similar in appearance, but smaller, to those found in the first variety.

Imbedded in a greenish slough-like glairy substance, which, on exposure to air and the action of spirit, shrinks into mere shreds. It is stated in my rough notes to be composed “of numerous filaments, forming a kind of network, with much granular matter, oil globules, and granular cells. The filaments appear, in many cases at least, to be hollow,” &c. I regret that this description is so incomplete, as my present conviction is, that the substance referred to may represent the *mycelium*, and the fungi, *spores* spontaneously generated in it. No other similar case has yet come into my possession, and this one gave a clue to all the rest.

2. Single, or compound particles, brown or bright pink coloured, visible as reddish grains to the unaided eye; very numerous.

Form oval and regular, when single; frequently double or quadruple, triple, or dividing into six or eight, then each particle is angular in form; often cuboid.

Ultimate structure obscure: no cell-wall or nucleus; uniform throughout, and either of minute beaded fibres, or more likely made up of *very* minute rounded nuclei, which escape on bursting. Intermixed are spheroidal masses of fat crystals, many fat globules, which, like the *fungi*, are tinged pink, so that the uniform reddish colour of the fleshy substance in which they are found is owing to both structures. This matrix (*mycelium*?) was probably similar to that described in the last case.

3. Light coloured or brownish granules, compared to poppy seeds, or mustard seed, &c.; very distinct to the eye, and often aggregated into mulberry-like masses of varying sizes; very numerous; consistence compared to that of cheese.

Structure, in all cases composite; each granule being formed by the aggre-

gation of minute bodies, which resemble more or less the separate particles above described, dozens of which must go to form a single granule. Every minute particle is surrounded by an investment of crystals, giving the appearance of a wreath or fringe to each; they are structureless, and of a fatty nature, and may equal in length the radius of the fungus particle. The mulberry-like masses are but aggregations of these granules. Spherical clusters of granules may be seen $\frac{1}{100}$ to $\frac{1}{200}$ in. in diameter.

Fatty crystals and oil globules are abundant. The fleshy matrix above noticed probably exists in a modified form, but as no *fresh* specimen has reached me, no conclusion can yet be made.

4. Of this variety I speak with some hesitation, but it may turn out to be a transition state from the *black* to these *light-coloured* species; the colour is that of mahogany. Its peculiarity is as follows: with many of the appearances of the last described, as regard colour, form in mulberry-like masses, &c., it has the structure of the *black* variety, only the beaded fibres are not distinct. The smaller granules very much resemble in form and size those of that variety. Spheroidal masses of acicular crystals, perfectly white in colour, are abundant; they are probably fatty in nature.

Dr. Carter, speaking of the relation of these two varieties of the disease, remarks—that the external appearances in both cases are similar, that the structural changes appear to be similar, and that the clinical history is the same.

PART III.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

(A) CONCERNING PREGNANCY AND PARTURITION.

ART. 138.—*On the relation between Menstruation and the Phases of the Moon.* By Dr. STROHL.

(*Gaz. de Strasburgh*, vi, 1861: and *Schmidt's Jahrb.*, No. 10, 1861.)

THE conclusion at which Dr. Strohl arrives, after a careful investigation, extending over a period of two whole years, of the times of menstruation in 5828 women, are these:

1. That the moon appears to exercise a marked influence over menstruation.

2. That during the period of the full moon the number menstruating was only small.

3. That the *maximum* number menstruating was in the first quarter.

4. That during the period of new moon the number menstruating was nearly as small as during the period of full moon.

5. That the lunar apogees and perigees are without any marked influence on menstruation.

6. That the austral lunistice has a more marked influence on menstruation than the boreal lunistice.

7. That diminution in the menstrual flow is a probable result of a rise in the barometric level.

— It may be added that the women upon whom these investigations were made were prostitutes, and that Dr. Strohl held an official appointment which required him to institute continual inquiries into the sanitary condition of these unfortunate creatures.

ART. 139.—*On Dysmenorrhœa and Sterility.*

By Dr. JOHN COGHLAN, of Wexford.

(*Medical Times and Gazette*, June 1, 1861.)

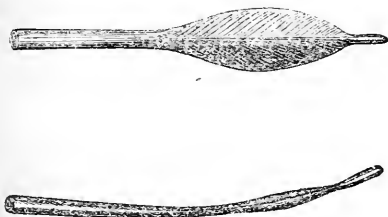
"During the past few months," says Dr. Coghlan, "I have been very successful in relieving some cases of dysmenorrhœa, by incising the os and cervix uteri, and as my mode of performing this operation is different from that usually adopted, I think it well to point out to the profession what I consider to be its advantages over the previous

modes of proceeding. Dysmenorrhœa depending on mechanical constriction of the cervix uteri, I believe to be much more frequent than some of our writers on the subject would lead us to suppose, while I consider the pure neuralgic form of the disease to be very rare. In those cases where we find obstruction at the cervix uteri, and that great nervous susceptibility exists at the same time, we are sure to have uterine and ovarian congestion, and these causes acting and reacting one on the other, produce the great amount of suffering which we find in bad cases of dysmenorrhœa. It might be thought from a patient passing an occasional menstrual period without pain, that no mechanical obstruction existed, but from careful observation I have good reason to believe that we are not justified in this conclusion. For should the subject of dysmenorrhœa, at the accession of a menstrual period, be favorably situated for the gradual secretion of the fluid, and the prevention of local congestion (confined to bed, for example) it is by no means unlikely that she may pass the period with little or no pain, though more or less of mechanical constriction of the cervix uteri, when brought into play under ordinary circumstances, may be the whole source of her sufferings. Having entertained these opinions for some years, I have from time to time treated bad cases of dysmenorrhœa by endeavouring to dilate the os and cervix uteri by means of bougies and plugs of compressed wood. These latter, from their swelling by the absorption of moisture from the parts, produced rather satisfactory results for a time, but these results were not permanent, and the same proceeding had to be repeated. I never hesitate in my practice to make a vaginal examination, or use the speculum, when I consider it necessary, but I have an utter objection to have to repeat it day after day, as in dilating the cervix uteri by bougies, for in addition to its being disagreeable to our patients, I think it has a tendency with most women to diminish their self-respect. For these reasons I have given up the practice of dilatation for a considerable time.

"About eight months ago, a woman, about twenty-six years old, suffering from a very bad form of dysmenorrhœa, applied to me for relief. She stated that she had been a great sufferer from her first menstrual period up to the present, in fact, that from that one cause she had spent a life of misery. She had been four years married, had no children, and her suffering at the menstrual period had become much increased since her marriage. On examination I found the os uteri much enlarged, and presenting a flat disk nearly an inch and a half in diameter, instead of its usual rounded form; the external orifice was small, and the constriction was so great at the cervix that I could not pass a No. 1 flexible bougie. At a subsequent examination I carefully, but with some difficulty, passed the stylet of a catheter into the cavity of the uterus. I then passed into the cervix a small plug of pine wood compressed by drawing it through five or six holes of a wire draw-plate, and thus gained some amount of dilatation of the canal. On the following day I incised the os and cervix by means of the instrument represented below. Having perfected the incision, I took a piece of sheet lead rolled out so thin as to be very light and flexible, but sufficiently thick to retain its shape, about

an inch long, and three fourths of an inch wide, rolled it in its width into a small tube, and turned the edges of the ends slightly out into a lip. I introduced this tube into the incision, and then by passing the blades of a long, thin, dressing forceps into the tube, and opening them a little, I dilated it to the full extent of the incision. On examination, two days after, I found the tube in its place; I had to replace it twice within the following week, from having fallen out, but recovery took place without any bad symptoms; I then lost sight of my patient till about a fortnight ago, when I learned that at the next menstrual period she had considerable pain, but so little in comparison to her former sufferings, that she had not recourse to the opiates which she had been accustomed to use; since then the pain has been gradually diminishing, she had not then menstruated for seven weeks, and I think it probable that she is pregnant.

“Front and profile views of Dr. Coghlan’s probe-pointed Metratome.”



“This instrument consists of a central blunt or probe-point, less than a quarter of an inch long, and about the thickness of a No. 1 bougie, and proceeding from this are two cutting sides about three eighths of an inch wide. The whole instrument, including the handle, is about eight and a half inches long, and is slightly curved for three inches from the point, to correspond with the oblique position of the uterus. The advantage of the instrument is that, guided by the probe-point, we are sure with ordinary care to have our incision right into the uterine cavity, and perfectly central, and by using instruments of different widths we can have our incision of the exact extent we desire. By means of the leaden tube we get rid of the disadvantage of having an absorbent, offensive, and irritating plug, and of the necessity for frequent examinations.”

ART. 140.—*On local Emmenagogues applied to the Uterus.* By Dr. SIMPSON, Professor of Midwifery in the University of Edinburgh.

(*Medical Times and Gazette*, June 15, 1861.)

The surface of the cervix uteri has been occasionally made the seat of local stimulating applications for the restoration of the catamenial secretion. The lining membrane of the uterus, and the cavity of the organ have latterly been more frequently used for this purpose.

Nitrate of silver to the cervix uteri, applied in substance or in a strong solution, so as to blister, is occasionally used with some degree of success by our French medical brethren for the cure of amenorrhœa. Lubanski and Egan have published cases of its successful employment. But—

Direct stimulants applied to the uterus or uterine cavity itself are undoubtedly the most certain means at our command for recalling its suspended menstrual function. The irritant may be nitrate of silver, or cantharides, or iodine. They may be applied to the lining membrane of the uterine cavity by means of an instrument which is simply a Lallemand's porte-caustique of sufficient length to pass readily into the interior of the uterus—curved so as to adapt it to the uterine inclination—and furnished with a knob, like that on the uterine sound, at two and a half inches from the point, to enable you to know when the instrument has reached the fundus. Charged with some powdered nitrate of silver, or cantharidine powder or ointment, it is introduced, about the period when a menstrual discharge might be expected, into the interior of the uterus, and the stylet being then pushed forward, and subsequently rotated twice or thrice, the irritant is thus sprinkled over the mucous membrane, or dissolved out so as to come in contact with it. Dr. Simpson has known this form of irritant application produce menstruation in a few hours; and excite the womb in obstinate cases, when repeated at monthly intervals, to the healthy performance of its normal functions, and so put an end to a long train of distressing symptoms.

Dry cupping of the interior of the uterus.—Some years ago Dr. Simpson became strongly impressed with the idea that if we had any means of, as it were, dry-cupping the interior of the uterus, so as to draw the blood in larger quantity to the surface of its lining membrane, we might, perhaps, succeed frequently, in some varieties of amenorrhœa, in exciting the uterus to the resumption of its functions, and effect a temporary relief in the condition of our patient similar to that produced by leeches applied to the cervix uteri and elsewhere, but superior to it in being a more perfect imitation of Nature's mode of relief, and not likely to be attended with so much general deterioration of the system. With this view he has made frequent use of a tube resembling in length and size a male catheter, with a large number of thickly set small orifices stretching along for about two inches from its extremity, and having an exhausting syringe

adapted to its outer or lower extremity, by which the air could be withdrawn after it had been introduced into the cavity of the uterus.

FIG. 1.



FIG. 2.

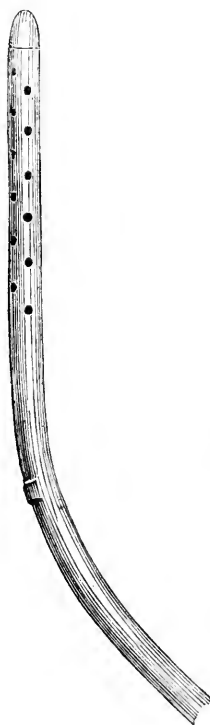


FIG. 1.—Porte-caustique for applying nitrate of silver, &c., to the interior of the uterus.

FIG. 2.—Instrument for dry-cupping the interior of the uterus.

The use of this instrument is in some cases attended with striking results. It usually happens that after a few strokes of the piston of
 XXXIV. 10

the syringe, and the retention of the instrument for two or three minutes in utero, a small quantity of blood is found in the tube of the instrument after its withdrawal. For it does not exactly operate as a mere dry-cupping apparatus congesting the lining membrane of the uterus. More generally the exhaustion of the syringe draws the mucous membrane of the uterus so much through the numerous small orifices which perforate its uterine extremity, that these congested and constricted points yield a little blood. Dr. Simpson has known the menstrual secretion to follow immediately upon the use of this means in cases of amenorrhœa that had been of long standing. But more generally it requires to be employed several days successively, or successively for a few days at two or three menstrual periods, before this happy result is obtained. And occasionally it will, like all other emmenagogue means, fail entirely. In fact, in the process of normal menstruation, other normal conditions obtain, besides a congested and active state of the vessels of the secreting mucous membrane of the uterus itself. The observations of Drs. Power, Lee, Girdwood, and others, show that menstruation is dependent upon changes in the ovaries or ovarian vesicles, as well as upon changes in the uterus. Sometimes the changes in the ovaries may possibly be present without the induction of the corresponding secretory action in the mucous membrane of the uterus. In such instances, in particular, the local means—nitrate of silver and dry cupping—may perhaps be chiefly of use. But probably in those cases where the ovaries require to be stimulated as well as the uterus, we have a more likely means of accomplishing this double purpose in the means next to be mentioned, than in those hitherto adverted to, viz., the introduction and wearing of a small and usually galvanic intra-uterine pessary as a general stimulant to these organs. In one of the first cases in which Dr. Simpson successfully tried this means—now many years ago—the patient, after menstruation commenced, was, in consequence of great exposure and cold, attacked with acute double pneumonia, which rapidly proved fatal. On the post-mortem examination of her body, along with Dr. Robert Hamilton, who had attended her in her illness, the menstruation, which had been established for the first time for many months, was accompanied with the usual congested and hypertrophied appearances in the lining membrane of the uterus, and with the apoplectic rupture and destruction of a Graafian vesicle in one of the ovaries.

Intra-uterine pessaries—This form of instrument consists simply, as is shown, of a small copper bulb (see Fig. 3, *a*, *b*), from the middle of which there rises a stem, *d*, made half of copper and half of zinc, and measuring two and one third inches in length, or rather less than the length of the uterine cavity. "In introducing it," says Dr. Simpson, "the patient is placed as usual on her left side, and the forefinger of the right hand having been brought into contact with the os uteri, the instrument is guided along it either with the right thumb or with the fingers of the left hand until the point of it passes through the orifice into the canal of the cervix. Usually you will experience no great difficulty in passing the instrument in this way up as far as the os internum; and if you now remove the point of the

forefinger from the os and apply it below the bulb of the instrument so as to press it gently upwards, you will sometimes succeed, with the greatest ease, in insinuating it entirely into the uterine cavity, till the

FIG. 3.

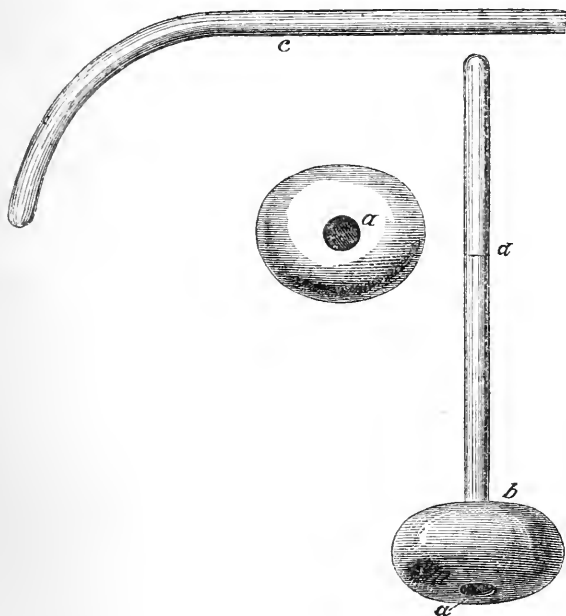


FIG. 3.—Full-sized sketch of the galvanic intra-uterine pessary, *a b d*, and of the staff, *c*, used for introducing it. *a*. Perforation on the lower surface of the bulb, *a b*, of the pessary, into which the point of the staff is made to fit; *b d*, stem, or intra-uterine portion of the instrument, consisting in the lower half, from *b* to *d*, of copper, and towards the point of zinc.

upper surface of the bulb is felt to be in apposition with the lips of the cervix. In other cases, however, you will meet at this stage with some degree of difficulty, for the os internum is occasionally the site of a kind of stricture, and this state of matters is further not unfrequently complicated by a slight anteflexion of the whole organ at the union of the body and cervix, so that the point of the pessary is apt to be caught at this level, and its complete entrance into the uterine cavity obstructed. In such cases you will best effect your object by pressing the bulb of the bougie very much towards the hollow of the sacrum, so as to tilt forwards the point of it, and to make

it move slightly from side to side, or from before backwards, when you will feel it suddenly passing the constricted spot, and the uterus settling down, as it were, on the instrument, without the exertion on your part of any active or injurious amount of upward pressure. I have spoken of the introduction of the intra-uterine stem-pessary as being effected by the unaided action of fingers, because, for a long time past, I have never had recourse to any other means. But, as you may observe, there is, on the surface of the bulb opposed to that from which the stem springs, a small orifice, *a*, intended to admit the point of a staff, *c*, which may be used to facilitate the introduction of the pessary. The staff is made of steel, is about eight inches in length, and is slightly bent at the point, so that when it is fitted into the hole in the bulb of the bougie, the latter can be guided by means of it in any direction, with more precision and power. I fear, however, that no mere description I can give you as to the mode of passing the intra-uterine pessary will enable you in any case to effect its introduction. This is one of those little operations which you will only succeed in performing properly by a certain amount of practice; and I believe that after you have tried it a few times, so as to have gained a little tact and skill in the manipulation of the bougie, you will come to effect its introduction easily with the fingers alone, and discard altogether the use of the staff. There is one secret regarding the introduction of this instrument that I have to tell you. Sometimes you may have succeeded in passing the uterine sound easily enough, but are foiled in your effort to introduce the permanent pessary. In such a case you may save pain to your patient and trouble to yourself by re-introducing the sound, and leaving the patient lying with it in the uterus for half an hour or an hour, at the end of which time you will find it is so placed or so patulous as readily to admit the intra-uterine bougie. But you may ask, will the instrument thus introduced remain of itself *in situ*? In the majority of cases it will; and always with most certainty in those where the internal orifice has been so contracted or curved as to render the introduction of it somewhat difficult. In other cases its re-introduction is attended with no difficulty or discomfort, and you will find that after it has been worn for some days, the zinc half of the stem becomes covered with a white saline crust of greater or less thickness, which tends to enable it afterwards to keep its position. Though the zinc portion is generally deeply encrusted on the withdrawal of the instrument, the copper portion is always, on the contrary, clean and clear of all deposit. Before re-introducing it, remove the crust from the zinc portion, and wash it with vinegar. If you find it necessary you may sometimes introduce below the instrument, as I have not unfrequently done, a small gutta-percha pessary, such as we use in the treatment of prolapsus uteri, which will support the intra-uterine pessary and prevent it from slipping out. I never saw the use of this instrument for the cure of amenorrhoea attended with any untoward result, and I and my assistants have employed it in a very great number of cases. Often we see its introduction immediately followed by the most marked results, especially with regard to the cure of the headaches and other secondary symptoms; and if worn for a sufficient

length of time, it does not often fail in exciting the uterus to the performance of its functions, or in recalling them when they have become suspended. I have seen menstruation speedily recalled by it after almost shop-loads of physic had been used in vain for the purpose. It produces its effect, I believe, simply by the gentle and continued stimulation of the whole uterine system. Probably other kinds of foreign body lodged there would produce much the same effect; and I have treated cases of amenorrhœa with success by the introduction of a stem pessary made entirely of copper or of German silver, such as is used for dilating the cervical canal in cases of dysmenorrhœa. But in cases of simple amenorrhœa I prefer to have the instrument made of two different metals, as suggested by Dr. Weir, because the slow galvanic action resulting from the chemical changes effected in the zinc increases the chances of a speedy and successful issue."

ART. 141.—*Remarks on Kiestine, and its existence in the Virgin and Sterile States.* By Dr. J. BRAXTON HICKS, Assistant Obstetric Physician to Guy's Hospital.

(*Guy's Hospital Reports*, 3d series, vol. vii, 1861.)

These cases, though not numerous, are sufficiently decisive to prove that impregnation is not necessary to the production of kiestine. Case 5 must be considered to completely settle the question, though it does not therefore follow that every similar case should have kiestine, nor will every case of ovarian disease be coupled with it. It is sufficient for the establishment of the point that such cases may have it. It is a matter of no slight difficulty to obtain cases where there has been not the slightest amenorrhœa or flooding during the whole life, such as was the case in the instances here brought forward. Kiestine is a constant and early companion to pregnancy, and, when once set up by that condition, it may be found for many years after, and is liable at any time subsequently to be reproduced upon any irritation of the sexual organs. Dr. Hicks has therefore excluded many cases which, although satisfactory to his own mind, could not be put forward as absolutely indisputable. Kiestine has been hitherto considered so decisive a test of pregnancy—at least at some time or another—that when found in the unmarried woman it has condemned her character at once. That this is correct in the majority of cases there is little doubt; but to apply it to every one is an instance of arguing in the circle, tending to mislead the practitioner, and to do injustice to the innocent.

CASE 1.—Single, æt. 33; hymen perfect, uterus very tender; menses fortnightly. Kiestine was found in the urine. She was under observation for a year.

CASE 2.—Married, æt. 25. Had never had the slightest symptoms of pregnancy. Has two fibrous tumours in uterus. There is milk in breasts, and kiestine in the urine; menstruation always regular. Has been under observation for eighteen months, without change.

CASE 3.—Married eight months. Suffering from congestion of uterus. Menstruation always regular; kiestine in the urine; milk in breasts. Remained under observation for many months, without any change.

CASE 4.—Prostitute, who had never been pregnant, nor had had any suspension of menstrual period. Fibrous tumour in anterior wall of uterus. Kiestine existed in the urine, though not very copiously; no milk in breasts. Under observation for some months, without change.

CASE 5.—Healthy young woman, æt. 21; imperforate hymen; retained menses; vagina distended to the utmost, and uterus about size of a large fist, as far up as umbilicus. Kiestine well marked; no milk in breasts.

CASE 6.—Single, æt. 40. Hymen would not allow the little finger to pass; large multilocular ovarian tumour. Kiestine in urine, well marked; no mammary secretion.

CASE 7.—Married, æt. 40. Has never had any symptoms leading to a suspicion of pregnancy; has a large multilocular ovarian tumour, which has been tapped twice, and injected with iodine once. Kiestine very marked; no mammary secretion.

ART. 142.—*On Serous Discharges during Pregnancy.*

By M. DANYAU.

(*Gaz. Heb. de Méd. et Chir.*, Dec. 21, 1860; and *Edin. Med. Journal*, Feb., 1861.)

At the meeting of the Society of Surgery of Paris, held on the 19th of December, 1860, M. Danyau made some remarks on the above subject. It is sometimes noticed that, during the last weeks, or even during the last months of pregnancy, an intermittent serous discharge takes place, regarding the nature and origin of which there has been much difference of opinion. Nægele thought that it could not be the amniotic fluid, but that it was secreted between the membranes of the ovum and the uterus; this opinion was generally received, until a fact observed by Ingleby, and cited by him in a memoir on uterine hæmorrhages, again raised the question, and made it probable that it was the liquor amnii. In the centre of the membranes the perforation through which the fœtus had passed was found, and nearer the placenta was another orifice which had given exit to the fluid. M. Dubois then met with another case of the same nature, where the small opening was of old standing, and its margins had a cicatrized appearance.

Such was the position of the question as briefly stated by M. Danyau, who laid before the Society the membranes from a woman who was delivered on the 12th of December, in whom a serous discharge had existed for fifty-six days. The placenta was inserted near the neck of the uterus; on one side was to be seen a large perforation, that through which the infant had passed, while opposite to it was another small opening, which had allowed the escape of the amniotic fluid. The discharge, said M. Danyau, may be intermittent, and more or less abundant, according as the fluid escapes more or less rapidly, or accumulates between the membranes and the wall of the uterus.

ART. 143.—*On Vomiting in Pregnancy, considered especially in relation to Etiology.* By Dr. W. M. TURNER.

(*West India Quart. Magazine*, Aug., 1861.)

"The ultimate and prime cause of this vomiting," says Dr. Turner, "is, in my opinion, the *pressure exercised on the blood-vessels by the gravid uterus*. Irregularity of circulation is thus increased. We find œdema of the *lower extremities*, *proving* this fact. Why should not the upper portion of the body suffer likewise from the same cause? The brain, for example, *must in a measure be improperly emptied and badly irrigated*. Its function is disordered—hence the derangement of stomach through sympathetic media. This seems to me to be rational at least, for by it can be explained *all cases of morning sickness*, and all absence of it. *Pressure on the blood-vessels*, I consider, then, the *prime cause of vomiting in pregnancy*. We know that the womb, by pressure on the vena cava descendens, does create an œdema of the lower extremities; also, we have neuralgia produced by the pressure of same organs, on the nerves, sacral plexus, &c. It is very natural that the sickness should be so decided in the morning, for the recumbent posture is eminently favorable for bringing about the pressure as mentioned. The feeling of nausea passes away as the patient stirs about, and as the circulation becomes improved and more general. In some cases where there is extreme pelvic and abdominal contraction or *narrowness*, as I conceive it—when the pressure is more or less constantly exercised—then we have a persistency in the vomitings. So, on the contrary, where there is excess in abdominal and pelvic capacity, or where the fœtus is small, there is not pressure in either case, and *par consequence*, no vomiting. These statements can be verified, and *are* verified, by our own experience. So far as regards the nausea which is present in ulcerated conditions of the neck of the uterus, at menstrual periods, and in malpositions generally, I think all can be satisfactorily explained by my hypothesis of *pressure*; for in most of these cases we find the womb—sometimes incredibly—engorged and enlarged. I recollect a case in Velpeau's ward in La Charité Hospital. The woman suffered very much; had violent pain in lumbar region, and excessive vomitings all the time. Yet by causing that woman to lie on her belly, with the pelvis raised above the level of the head, I have seen the most excruciating neuralgia, and the most obstinate vomitings, relieved as if by magic. The woman had a retroflexion, and great enlargement of the uterus, and I attribute the relief she experienced to the *removal of pressure*."

ART. 144.—*On the Induction of Premature Labour, and on a new indication for operating.* By Dr. SIMPSON, Professor of Medicine in the University of Edinburgh.

(*Edinburgh Medical Journal*, Sept., 1861.)

At a late meeting of the Obstetrical Society of Edinburgh, Dr. Simpson said that he had brought on labour prematurely, about four

years ago, in a case where he believed that he had met with a new indication for the performance of the operation. Mrs. L., the patient who was the subject of the operation, had fallen in labour of her first child in 1851. Her labour had lasted two days, and was terminated by the head of the child, which was in a hydrocephalic condition, being perforated by Dr. Jamieson of Peterhead. Her second labour, in 1853, was also terminated by means of the same operation, by Dr. Johnston of Stirling, because of the same morbid condition of the fetal head. In 1856 he (Dr. Simpson) first saw the patient, in consultation with Dr. Johnston, at a time when she had arrived at the eighth month of her third pregnancy. There was every probability that in this instance again the child would become hydrocephalic, and be destroyed at birth; and the probability was increased by the circumstance that the only sister of the lady in question had given birth to but one child which had likewise been hydrocephalic, and had been delivered by means of craniotomy. The likelihood of the recurrence of the disease in the third fetus was still further impressed on his (Dr. Simpson's) mind, by a letter which he received about that time from Dr. Embleton of Embleton, in which that gentleman related how he had just delivered a woman of a child that presented by the breech, and was very difficult of extraction, because of the head being distended to twice the natural size from hydrocephalus. And Dr. Embleton had stated, further, that the first and third children of the same patient had been born hydrocephalic, and had been delivered by means of the forceps. Regarding it, therefore, as in the highest degree probable, in the case of Mrs. L., that if her third pregnancy were allowed to run its full course her third child would become the subject of intra-uterine hydrocephalus like its predecessors, he (Dr. Simpson) had two reasons to lead him to induce premature labour at once; viz., 1st, it was a matter of great importance for the lady to have a *living* child, and there was little prospect of her hopes being fulfilled if her progeny were all born hydrocephalic; and, 2ndly, it was fairly to be expected, that if the child could be brought into the world at once, and the conditions of its existence changed, it would have a better chance of escaping the dangers of the disease which had proved fatal to the first two children. The result justified his (Dr. Simpson's) expectations. Labour was induced, and a living child was born, which he had seen a few weeks ago in the enjoyment of the most perfect health. The method by which labour was induced in that instance, was one which he (Dr. Simpson) hoped would never again be employed. At that time, the means most commonly adopted for the purpose was the injection of tepid water into the maternal passages; and the manner in which this process acted in bringing on labour was then a frequent subject of discussion. He had become convinced that its *modus operandi* depended on the separation, which it effected, of the membranes from the interior of the uterus, and which he had come to regard as the exciting cause of parturition at the ordinary termination of a normal pregnancy. As the injection of water was attended with this drawback, that the bed and body-clothes of the patient became disagreeably moistened by the fluid that escaped, he determined to try whether the separation of the membranes might not be as effect-

ally brought about by some less discomfoting means; and, accordingly, he attempted to effect his purpose by the injection of atmospheric air, in the case of a patient whom he had seen before in consultation with Dr. Smith of Lasswade, and in whom he had induced premature labour on a former occasion. He introduced the air by means of a catheter passed into the interior of the uterus, between its walls and its contained membranes, on two successive days; and labour supervened within a few hours after the second inflation. In the case of Mrs. L., however, he had used neither water nor atmospheric air, but carbonic acid gas, which had just at that time been proposed as an oxytoxic by Scanzoni. The gas was introduced for the first time by means of a catheter on a Wednesday, and its injection was repeated once each day till the following Sunday. Labour pains supervened on the Saturday, and continued feeble and intermitting till the Monday evening. The os uteri was firm and cartilaginous, and a number of small incisions were made into it, to favour the dilatation. The child was not born till Tuesday morning, or for six days after the first injection of the gas. The case, however, was so far successful. But he (Dr. Simpson) believed that a similar operation *ought never again to be attempted*. For, having happened soon afterwards to speak of these cases to some of his confrères in another medical school, one of them, who was induced to adopt the operation, had the misfortune to lose his patient. The gentleman in whose hands the accident happened was a distinguished and experienced practitioner, and performed the operation with every care and precaution; yet the patient died in the course of a few minutes. The fatal effect was probably due to the separation of a portion of the placenta, and the entrance of air through the uterine sinuses into the circulation. The case was not solitary, however; for Scanzoni had recorded two fatal cases of the injection of carbonic acid gas into the uterus; and in a case in which the artificial and criminal induction of abortion, at Philadelphia, was attempted by blowing in air into the uterus, the patient suddenly expired. He (Dr. Simpson) therefore maintained that the injection of air or gas of any kind into the interior of the uterus, for the purpose of inducing premature labour, was an operation which we were not entitled to repeat. He (Dr. Simpson) had many times had recourse to the injection of tepid water for the induction of labour,—sometimes by means of Kiwisch's douche, which was a clumsy and inconvenient contrivance; more frequently by means simply of Higginson's syringe, the nozzle of which could be introduced within the os uteri. But, besides being attended with discomfort from the wetting of the bed, this operative procedure was open to the further objection, that it sometimes brought about a change in the presentation of the child. Moreover, he (Dr. Simpson) had been greatly alarmed by seeing a patient on one occasion faint under its use, probably from some of the fluid getting into the circulation. And in consultation practice he had seen two more alarming cases still, where both the patients died. In both, only a few ounces of water were injected; and yet rupture of the uterus took place. The occurrence of the rupture was to be explained, as he (Dr. Simpson) believed, by the fact, that the uterus being already fully distended, could not admit the few ounces of fluid neces-

sary for effecting the separation of the membranes from its interior without being stretched and fissured to some extent; and during labour these slight fissures might easily be converted into dangerous and fatal ruptures. In one of the cases he referred to, the patient died before labour was completed; the other, in twelve hours after its termination. They both occurred in the hands of most accomplished and able accoucheurs; and he (Dr. Simpson) thought the procedure ought to be entirely set aside, or should be had recourse to only in some exceptional circumstances. Fortunately, we had other and safer means of effecting our object; and of these, perhaps, the best was that now in very common use in Germany, viz., the introduction of a flexible male catheter into the interior of the uterus between the membranes and the uterine walls, withdrawing the stilet and leaving the catheter there until labour set in. The history of that operative procedure was, shortly, this: Dr. Hamilton used to bring on premature labour by separating the membranes from the interior of the cervix, to a distance of two or three inches, with his finger on a catheter. The plan was not very effectual, and required always to be repeated very frequently before labour supervened. About eight years ago, he (Dr. Simpson) had supposed that it might be produced more effectually by leaving a foreign body in the cavity; and chose as the subject of experiment a patient on whom labour had on two previous occasions been successfully induced by means of the water douche, and who had had several disappointments from habitual death of the fetus in the last two months of utero-gestation. On the occasion referred to, the membranes were separated to a distance of two and a half inches from the interior of the cervix by means of an intra-uterine pessary, which was left permanently in the cavity, in the expectation that labour would speedily supervene. It was moved about from time to time, but no signs of approaching labour appeared. The fetal heart continued to beat vigorously; and as it seemed quite probable that it might be carried to the full time with perfect safety, no supplementary measures were taken to ensure the premature occurrence of parturition. The pessary was thus worn for thirty-one days in the cervix, and was frequently moved all round its interior, without the slightest effect; for labour only supervened at length on the completion of the full term of pregnancy. Believing that labour could be more certainly induced by the separation of the membranes from the interior of the *body* of the uterus, he (Dr. Simpson) had afterwards attempted to do this by passing the uterine sound to some distance into the interior of the uterus, and moving it slightly from side to side, taking care to avoid the site of the placenta. The success attendant on this form of operation was so great, that for some years past he (Dr. Simpson) had used the sound almost exclusively for inducing premature labour. It had one disadvantage, however, inasmuch as in some cases it was found necessary to introduce it several times before labour was finally brought on; and in one case that had occurred in his practice some months ago, six days elapsed from the time of the first introduction of the sound ere labour finally supervened. The retention of the flexible portion of the male catheter in utero overcame this difficulty. If placed between the uterus and

membranes, labour seemed almost invariably to supervene within twelve hours. If its extremity chanced to perforate the membranes during its introduction, labour did not supervene in some instances for twenty or thirty hours longer. In Germany they were in the habit of introducing a gum elastic male catheter into the uterus, and leaving it there with the stilet till labour supervened. Fearing lest the uterus might be injured by the presence of a firm foreign body, he (Dr. Simpson) had withdrawn the stilet, and left only the flexible catheter, which remained until labour supervened. Statistics of fifty cases that had been operated on by this means in Germany had been collected by Dr. Amann, who showed that, in all, labour had been induced within twelve hours. He (Dr. Simpson) believed, therefore, that it would be found to be an improvement in the operation to leave a foreign body in the cavity of the uterus; but perhaps an india-rubber tube or some soft body would be found to be as safe an instrument, and quite as successful a one, as the elastic catheter. Dr. Simpson added, that in some special cases other modes of treatment might require to be adopted, and stated, in particular, that where it was desirable to have the os uteri dilated to some extent before labour came on, the sponge-tent might be employed with advantage.

ART. 145.—*On the treatment of cases of Abortion in which the Membranes and Placenta are retained.* By Dr. PRIESTLEY, Physician-Accoucheur to the Middlesex Hospital.

(*Lancet*, May 10, 1861.)

When abortion occurs in the early weeks, the ovum is frequently expelled without rupture of any of the membranes except the external decidua, because the attachments to the uterine cavity are unstable; the mass is then smaller and less difficult to push through the os uteri, and the contractile power of the uterus is very feeble. In the third, fourth, and fifth months the decidual cavity is obliterated, the placenta has acquired more intimate attachments to the womb, and the contractile power of the uterus being greater, rupture of the membranes commonly takes place before expulsion. The embryo having escaped, the secundines may speedily follow, or, lying in the os uteri, they may be removed by the finger or some simple instrument. In a considerable number of abortions, however, in which the fœtus and liquor amnii have been voided, the secundines are not soon extruded; and after the uterus has made repeated ineffectual attempts to expel them the os uteri closes and action ceases. Instances of this kind are common in obstetric practice, and are often a source of much embarrassment to the practitioner. Obstetric authorities differ widely as to the treatment which ought to be adopted when the secundines are not thrown off spontaneously, and particularly as to the propriety of manual interference. Dr. Denman, Dr. Davis, Dr. Ramsbotham, and Dr. Dewees, deprecate any attempts at extraction by the hand; and Mr. Ingleby held that "no manual extraction can be effected prior to the sixth month." Dr. Burns and Dr. Churchill regard interference

in this way as only allowable in exceptional cases; and Dr. Tyler Smith stands almost alone in recommending the removal of the secundines in all cases of abortion where they are retained. The author regards the question of treatment as an important one to all obstetric practitioners, as they might be blamed on the one hand for omitting a duty they ought to have performed, or on the other hand might be charged with meddling practice. The dangers and morbid conditions arising from membranous and placental retention are stated to be:

1. Flooding; this being sometimes of a very serious character, and the patient being always liable to hæmorrhage so long as a fragment remains.

2. Decomposition of the uterine contents, leading to local inflammation of the uterus and surrounding tissues, to phlebitis and phlegmasia dolens, and lastly to general poisoning of the system, as evidenced by irritative fever, peritonitis, rheumatic pains, the formation of abscesses, and even the occurrence of death.

3. Sub-involution of the uterus.

4. The generation of some of the forms of mole out of the tissue left in the uterine cavity, and the hæmorrhage attending the presence and expulsion of these morbid growths.

The entire absorption of the placenta is regarded as uncertain and not to be counted upon. Cases illustrative of the several sources of danger are detailed.

In considering the various methods of treatment which have been recommended, the author's experience leads him to believe that the effect of the administration of ergot is very uncertain, and that galvanism and injection of water are not to be depended upon. Any form of abortion-forceps which must needs be pushed beyond the reach of the finger he regards as useless and dangerous. He is thus driven to the conclusion that the introduction of one or two fingers into the uterus is the safest and best way to remove the retained uterine contents. In his hands such manual interference has never been followed by any evil results, and a considerable number of cases have fallen under his observation. He begs particularly to be understood as not advocating rash and violent attempts to empty the uterus. Rough and careless manipulation might be fatal to a patient; but the consequences of placental retention were so serious that, under ordinary circumstances, less risk was incurred by the operation. It is important to effect removal, not only before putrescence began, but before the os uteri became much contracted; and if in six hours after the escape of the embryo the placenta did not follow, it might be removed. The extraction might be effected sooner than this if much hæmorrhage were present. He has found it convenient in operations to place the patient on the back, with the thighs flexed on the abdomen; and while one hand steadied and depressed the uterus externally, the other was with all possible gentleness passed into the vagina. The os uteri is then dilated with the index finger, and the second finger followed if required. These two fingers form the best and most sensitive forceps, and although time and care might be necessary to their introduction, their employment was most satis-

factory. The administration of chloroform previous to the manipulation afforded great assistance by relaxing the passages and saving the patient from pain. The author has succeeded in removing the placenta with the hand in some cases days and weeks after the escape of the fœtus; but he has never ventured on any such attempt if inflammatory symptoms and irritative fever had already set in. Where the os uteri is too contracted to permit the introduction of the finger for the removal of a placental mass, its dilatation could be effected by sponge-tents, which had the double advantage of staying hæmorrhage and facilitating the passage of the finger.

ART. 146.—Case of Rupture of the Uterus in the fourth month of uterogestation. By Dr. M'KINLAY.

(*Glasgow Medical Journal*, Oct., 1861.)

CASE.—On the evening of Sabbath, 31st of March, I was requested by Mr. Macfarlane, one of the procurators fiscal of Renfrewshire, to proceed at once to a village distant about eight miles from Paisley, for the purpose of making a post-mortem examination in a case which seemed to be of a very suspicious character. The circumstances were the following: An unmarried female, who had been previously in a good state of health, and had been out the evening before, had died in a neighbour's house, or rather in a house where she slept at night, and none of her friends had been made aware of her illness until after her decease. She had gone to bed about eleven o'clock the previous night, not complaining, but rather in better spirits than usual, and was dead about seven o'clock the following morning.

On arriving at the place along with Dr. Richmond of Paisley, whom I associated with me on the occasion, I learned the following particulars:—The deceased, B. T—, was aged about thirty-seven years, of a robust habit of body, and had always been healthy. Was a farm-servant, but had latterly come into the village for the purpose of taking care of her father, who was an infirm old man. On the day previous to her decease, she had gone by railway to a neighbouring village, about four miles distant, accompanied by Mrs. W—, in whose house she slept. They returned on foot, and called at a farmhouse, where they partook heartily of tea, to which they had cheese. During the whole of that time the deceased was in good spirits; indeed, those who saw her, state that they had never seen her more cheerful. On their return home she remained in the house for some time, and between half-past eight and ten o'clock went out with a daughter of Mrs. W—, and visited some friends. When they returned, she went into her father's house, prepared his supper, milked his cow, and returned to Mrs. W—'s at about a quarter to eleven o'clock, shortly after which time she retired to bed, not complaining, and seemingly in good health and spirits.

Shortly after going up-stairs to bed, a little girl came down and stated that the deceased was very ill, on which she was seen by Mrs. W—. She stated that she was much pained in the stomach and bowels. When asked if she thought she had walked too far, she answered not; she said, however, in answer to a question put to her, that she was afraid of inflammation. At this time she was vomiting. A medical man who was in the house was asked to see her, with which he complied. He examined the vomitings, and having found some portions of the cheese of which she had partaken at tea, he said it was only disorder of the stomach, and ordered a mustard blister to be applied over the stomach. She applied the mustard herself, and

stated that she felt relieved by it, after which she lay quiet for some time. About half-past one o'clock she became worse, and the mustard was a second time applied by herself. When asked at this time if she was pregnant, she would give no answer. Between two and three o'clock a dose of castor-oil was administered to her, which she seemed reluctant to take, and on being asked the reason, she said that feeling her stomach a little out of order, she had taken a teaspoonful of sulphur in her father's house before she came in. This would be between ten and eleven o'clock. The mustard was applied a third time, but no alleviation of the symptoms took place. About four o'clock she was said to have confessed in an ambiguous manner that she was pregnant. Shortly after this she became quiet, and died, about a quarter before seven o'clock. No other person was called in, nor, as before stated, were her friends, who lived next door, made aware that anything was the matter with her.

Post-mortem examination.—On the lower part of the cheeks and around the mouth there were several reddish spots, but there was no mark of violence on any part of the surface of the body. Over its whole extent, the skin was very much paler than usual. Both pupils were dilated to a considerable extent; the teeth were slightly apart, and tongue was not protruding. On proceeding to lay open the various cavities of the body, the cellular tissue covering them was found to be more abundant than usual. On laying open the chest, the lungs were found perfectly normal in appearance, and at no part of their surface was there the slightest adhesion to the pleura costalis. There was no effusion into either cavity of the pleura. The pericardium contained about two fluid drachms of serous fluid. The heart was flaccid, and the right ventricle contained a small quantity of dark fluid blood. The right auricle did so likewise. The left ventricle also contained a very small quantity of blood of a similar description. The left auricle was empty. All the valves of the heart were normal. On laying open the abdomen, the cavity was found to contain a very large quantity of serum, blood, and clots of blood, which, upon being removed, were found nearly to fill a large wash-hand basin. The stomach, which was very much contracted, was carefully secured by double ligature, and removed from the body. Upon being opened it was found to contain a small quantity of a whitish pulsatous mass, having bits of what appeared to be cheese, and also a number of small blackish particles mixed up with it. The lining membrane was in several places much reddened. The whole stomach and its contents were carefully placed in a clean glass jar, which was duly sealed, labelled, and preserved for further examination. On laying open the oesophagus and pharynx above the ligature which had been placed upon it, they were found to contain a small quantity of fluid, through which were floating some globules of oil; part of this was removed and carefully preserved. The liver was normal, both with regard to size and appearance. The pancreas, spleen, and kidneys, were of a natural appearance. The duodenum, with its contents, were removed for further examination. The rest of the bowels were generally pale in colour, and at no part was there the slightest appearance of inflammation.

Projecting from the pelvis, there was a large tumour covered with clotted blood. This, upon careful examination, was found to be the uterus, partially protruding, through a rent in the fundus of which there was found a fœtus, apparently about the fourth month of utero-gestation, covered with its proper membranes. The fœtus was carefully removed, without dividing anything but the membranes and the umbilical cord, when the rent was found to be entirely across the fundus, and measured transversely four and a quarter inches, and in an antero-posterior direction it measured three and a half

inches. The uterus at the rent was normal in structure, and at no part was there any appearance of disease. Part of the pubis and ischia were carefully removed, and the organs of generation dissected from the labia inwards, but not the slightest mark of injury or discoloration could be perceived, and at the os uteri and in the neck there was found a plug of clear mucus completely closing the entrance to that organ. The distance from the os uteri was six and a half inches. The bladder contained about an ounce of whitish urine. On removing the calvarium the vessels of the brain and its membranes were found slightly congested. The substance of the brain was normal.

In accordance with an order from crown counsel the whole of the substances removed at the examination were handed to Professor Penny for the purpose of being submitted to analysis; but the result was entirely negative, as no trace could be found either of ergot, saving, or other noxious substance.

Dr. McKinlay has looked into a number of works on the subject, and the only work in which he can find anything to the point is 'Burns' Midwifery,' or rather, in notes attached to the work, where is given a case by Dr. Drake, in which the uterus seemed to burst at the fourth month, producing suppuration at the umbilicus, where an opening was formed by which excrementitious matter was discharged for some time. Again, in the 'Journal de Médecine,' 1780, there is the case of a woman who had the uterus ruptured in the fourth month of pregnancy. The accident was followed by uterine hæmorrhage, which continued for some time. The menses returned, but the body did not subside. In the ninth month she died. The uterus was found of the natural size, but the rent was still perceptible.

Merriman, after stating that rupture of the uterus has happened from a morbid state of that organ before the period of utero-gestation has been completed, directs attention to a case detailed in the seventh volume of 'Medical Reports,' by Mr. Ilot, of Bromley, where rupture of the uterus took place in the sixth month of pregnancy. The patient was awakened from her sleep by a sudden pain about the umbilicus. She had no return of pain, but sank and died. The fundus uteri was found ruptured.

ART. 147.—*On Obliquity of the Fœtal Head in the mechanism of Parturition.* By Dr. J. M. DUNCAN, Physician for Diseases of Women and Children at the Royal Infirmary, Edinburgh.

(*Edinburgh Medical Journal*, Aug. and Sept., 1861.)

The object of this paper is to show that the obliquity, or lateral obliquity, of the fœtal head when passing through the brim of the pelvis, described by Nægele, by some of his predecessors, and by his followers down to the latest authors, does not exist in natural parturition; and that obliquity, or lateral obliquity, of the fœtal head, when passing through the outlet of the pelvis, not described by Nægele and his followers, does occur in natural parturition.

The first and chief reason for denying the existence of obliquity of the fœtal head at the brim of the pelvis is, that it is not observed. Dr. Duncan has been in the habit of carefully making out the position of the fœtal head in the brim of the pelvis at the beginning of labour;

and, although he has observed that it varies to a slight extent in different cases, he has satisfied himself that it enters the brim, very generally, directly and not obliquely.

After the head has passed through the brim and upper half of the ligamentous pelvis, it does advance obliquely in its subsequent progress,—that is, the head of the child impinges on the planes of the parts of the pelvis through which it is passing, or on planes at right angles to the axis of the lower parts of the pelvis, not directly, but indirectly or obliquely. A mesial part of the fœtus does not first touch these planes, but a lateral point.

In the first half of the head's course through the ligamentous pelvis, a point in or near the sagittal suture is the presenting point. There the caput succedaneum is formed. During this part of its course the head advances in the axis of the brim, which almost exactly corresponds with the axis of the upper half of the ligamentous pelvis. During all this time, if the head is not covered by the cervix uteri, the right parietal bone is the part first and easiest felt; and the further it advances the more is this the case. As it advances, and passes the first bone of the sacrum, the sagittal suture approaches nearer to the sacrum, or rather to its lower portions, and becomes more distant from the symphysis pubis. When the biparietal diameter of the head has reached the lower boundary of the upper half of the pelvis, it is arrested in its direct progress. The vertex impinges on the posterior wall of the pelvis, and, in its further advance, the head, as a whole, must change the direction of its course. This change of course is too abrupt for the parts of the head to follow it perfectly. Moreover, there is no room in the pelvis for such a degree of lateral flexion as this would imply,—that is, as would be necessary to maintain the head presenting directly to the plane of the pelvis through which it is passing. While advancing at this point of its progress, the presenting part, therefore, is changed. It soon becomes the upper and posterior part of the right parietal bone, instead of, as before, a point in the mesial line of the head. With this point advancing in the axis of the pelvis, it is evident that the sagittal suture or mesial parts are far removed from it, and consequently that the head is passing through the lower half of the pelvis, the outlet, over the perinæum and through the vulva, more or less obliquely, and not directly. In accordance with this obliquity, the child's head is flexed laterally, or, to be more exact, flexed obliquely,—that is, bent not directly over the right shoulder, but in a direction midway between extension and direct lateral flexion. As it approaches the orifice of the vulva, and rotates so as to bring the occiput nearer to the pubes than it was in the earlier parts of its progress, this flexion gradually approaches nearer to extension; but it does not become direct extension, almost always maintaining an obliquity,—that is, a direction between extension and flexion.

Under two sets of circumstances, not observed in ordinary labours, the presentation of the fœtal head may be direct from the beginning to the end of the process. In the rare cases where the head enters the brim and passes through the whole pelvis with its long axis in the antero-posterior diameter of the passage, the head will offer itself not obliquely, but directly, in its whole course. The presentation, indeed,

will only shift backwards upon the child's head as it descends, maintaining always a position in the mesial line. Again, it is possible that the fœtal head may descend directly with its long axis in the transverse diameter of the pelvis, till it makes a complete quarter of a circle rotation. Such cases are not subjected to the ordinary laws of the mechanism of parturition.

It is to be remarked, then, in the second half of its progress the head does not present directly, but obliquely, and that it is born with this obliquity. But this last obliquity is unlike the former, in being quite in accordance with Nægele's statement of the phenomena, though he omits to mention this special point, the obliquity which he describes in this portion of labour being the position of the long axis of the head in the right oblique diameter of the pelvis, not the oblique presentation of the head to the plane of the outlet, or other portions of the pelvis through which it passes in the latter parts of its course. Further, not only is there observed this obliquity to the planes of the pelvis, but there is a change in the attitude of the fœtus simultaneously produced. The head is at first, in this second part of its course, laterally flexed to the right with a backward obliquity; and when passing the vulva this is slightly changed, the condition being one of extension, with a lateral obliquity to the right shoulder.

This obliquity of the child's head to the planes of the lower parts of the pelvic passages is not only observed, but is easily explained. In its descent, the head, if of its ordinary size, must follow the direction of the curved axis of the pelvis. It is possible to imagine the presentation continuing direct while the other parts of the mechanism remain unchanged; but there is no room in the pelvis for the great right lateral flexion of the head that would be necessary to maintain the presentation direct, and the mechanism does not demand it. A certain amount of lateral flexion is made, and this diminishes the obliquity. This moderate lateral flexion is not produced by spontaneous fœtal motion, but by the powers of labour urging the child through a canal which at this part is rigid and contracted enough to force the soft fœtus to adapt itself to its graduated curvature.

ART. 148.—*On the influence of the Anterior Wall of the Pelvis upon the mechanism of Labour, especially in minor Pelvic Contractions.*
By Dr. CRÜGER.

(*Monatsch. f. Geburtskunde*, Jan., 1861; and *Medico-Chir. Rev.*, Oct., 1861.)

In an interesting memoir, Dr. Crüger remarks that the consideration of the shortest pelvic diameter is by no means the most important, and that the relation of the anterior wall has been entirely overlooked. He relates three cases, in one of which, with a conjugate diameter not exceeding two inches and three quarters, a living, nearly full-grown, child was born by the natural efforts; a second, with a conjugate diameter of three inches and a half, in which a premature child was born with its cranium burst; and a third case in which, with a conjugate of three inches, delivery was impossible. In examining a number of skeleton-pelves, it will be seen that the anterior wall is very

variously formed. Sections through the symphysis are either nearly parallel as to their anterior and posterior surfaces, or concave within, or, as in the majority of instances, the anterior wall in its upper third, sometimes in its upper half, is bent forwards. These forms must exert a considerable influence upon the mechanism of labour, especially when the pelvis is slightly contracted. In normal labour, Dr. Crüger describes the direction of the force of the uterine contractions to take a line forming an angle with the level of the brim, which tends to throw the head upon the anterior wall of the pelvis. This, however, presents no obstacle to the descent of the head in ordinary circumstances.

ART. 149.—*On a rare mechanism in Face-presentations.*

By Dr. BRAUN.

(*Monatsch. f. Geburtskunde*, Feb., 1861; and *Med.-Chir. Rev.*, Oct., 1861.)

Professor Braun describes the following modifications of the mechanism of face-presentations:

1. Face-presentations change into occipital-presentations; this scarcely ever happens, except during the period of dilatation.

2. The normal rotation of the chin from backwards forwards may first be produced by powerful pains whilst in the vulva.

3. The commenced rotation may not be completed, but the face reaches the pelvic floor in an oblique direction, and thus passes through the ostium vaginae. This rather frequently happens.

4. The face leans with the chin upon the coccyx, whilst the mouth and nose press upon the floor of the pelvis, the forehead and greater fontanelle remaining visible in the ostium vaginae. The calvarium is flattened through the pressure of the anterior wall of the pelvis, and first during the birth the forehead and nose, then the upper lip and chin, pass the perinaeum. This is very rare.

5. The forehead remains pressed against the anterior wall of the pelvis, the eyes and nose become first visible at the vulva, then the remaining part of the face passes over the perinaeum, and lastly, the forehead is driven under the symphysis.

The author then describes a case in which a mature child presenting by the face was born with the chin on the perinaeum. After the birth of the head, the back of the child remained directed forwards. The child was dead. In another case the delivery was effected by forceps. The root of the nose first became visible, the chin passed over the perinaeum, and then the calvarium and occiput came under the symphysis in completely transposed mechanism. The child was alive.

ART. 150.—*A Dynamometrical adaptation of the Forceps.*

By Dr. KRISTELLER.

(Monatsch. f. Geburtskunde, 1861; and Med.-Chir. Rev., July, 1861.)

Dr. Kristeller has submitted to the Berlin Obstetrical Society a contrivance by means of which the exact degree of extractile force employed in using the forceps may be measured. He observes, that the obstetrice, in seeking to describe the extent of the obstacle to delivery, is compelled to draw upon his imagination, and to use vague terms, as "easy, feeble, moderate, difficult, &c." For these expressions his instrument enables us to substitute the figures of a scale. His instrument is somewhat complicated, and not easy to describe without the help of drawings. The dynamometrical apparatus is adapted to the handles. Each handle consists of two parts, one moveable and the other fixed. The fixed part is a strong steel-plate, which forms the continuation of the fenestra. The moveable part is a half-cylinder of brass, which is so adapted by its plane surface to the steel-plate that it can ride freely up and down, but in no other direction. Above, the brass half-cylinder is closed by a projection forming a notch in which the fingers of the operator are hooked for power of traction; below, the cylinder ends in the ordinary dilation for the hand to rest upon. Within the half-cylinder lies a strong steel spiral spring, which presses above against the prominences which support the operator's fingers, and to which the chief part of the extractile force is applied, and below is fixed immoveably to a projection from the steel-plate. When the operator pulls with his right hand upon the upper prominence, and with his left upon the shafts of the handles, he draws the moveable half-cylinders down, compressing the spiral springs, the elasticity of which serves to measure the strength employed. This is indicated by a graduated index adapted to the handle below the lock.

Dr. Kristeller enters with some minuteness into the applications and uses of this instrument. He especially insists upon the advantage it offers as a measure of the hindrance to delivery, enabling us to determine the time when the forceps must be abandoned for the cephalotripter.

ART. 151.—*On unusual elongation of the Fœtal Head as a cause of difficulty in the application of the ordinary Obstetric Forceps, with a description of a modified instrument.* By Dr. GRAILY HEWITT, Physician to the British Lying-in Hospital, &c.

(Proceed. of the Obstetrical Society of London, Lancet, June 15, 1861.)

The object of this communication is to direct attention to the occasional occurrence of difficulty in the application of the ordinary English forceps, produced by excessive elongation of the fœtal head during labour, and to insist on the necessity for using an instrument adapted by its form and size to the shape of the head in these exceptional cases. The author's attention was directed to the subject by

the fact, that in a particular case in which it was judged advisable to use the ordinary short forceps a difficulty was experienced in applying them. After the labour had been subsequently completed, the head of the child, compressed and moulded to the shape of a narrow and unyielding parturient canal, was found to be unusually elongated in the occipito-mental diameter. The head measured in this diameter six inches, half an hour after birth. The actual size of the head was not anything remarkable. The kind of alteration in shape here noticed was such as is frequently observed in primiparæ; but the author had never had occasion before to notice such elongation in a case where the forceps was required. The difficulty experienced in applying the forceps was due to the fact, that the side of the head presented, owing to its elongation, a curve different to that ordinarily present, and the blade of the forceps used was not long enough, while, at the same time, it was too sharply curved, to meet the requirements of the case.

The occipito-mental diameter of the head, with which we are chiefly concerned in reference to the applicability of the forceps, measures, according to various obstetric authorities, from $4\frac{1}{2}$ in. to $5\frac{1}{2}$ in. Van Pelt, who has recently published the results of his measurements in 700 cases, found the average to be $5\frac{1}{3}$ in. These measurements were made, not immediately after the escape of the head, but when sufficient opportunity had been given to the head to recover from the effects of compression during the parturitive act. No observations had hitherto been made for the purpose of ascertaining the difference between the measurement of the occipito-mental diameter during parturition and at a period a few hours after the head had been born. The difference in question was known, however, practically to be considerable.

The relations subsisting between the curve and length of the blades in the ordinary forceps and the shape and curve of the head in ordinary cases and in cases of undue elongation were next alluded to, and illustrated by means of drawings. Thus it was made evident—1. That the ovoid presented by the head (as it is in ordinary cases) is such that the ordinary forceps, with a length of blade of from $6\frac{1}{2}$ in. to 7 in., and a curve the arc of a circle of from 10 in. to 11 in., is admirably adapted to it. 2. That when the ovoid exceeds $5\frac{1}{2}$ in. in its long diameter, the forceps in question is likely to be inapplicable, and, as in the case alluded to, difficulty might arise in endeavouring to apply it. How often would such exceptional elongation be observed in practice? In Van Pelt's cases there were twenty-eight out of 646 in which, some little time *after* the end of the labour, the long diameter measured $5\frac{1}{4}$ in. Hence in about 3 per cent. of all cases we may expect to find the head so long as to give rise to the difficulty in question, and this not taking into consideration cases in which there may be undue elongation, and a less degree of difficulty in cases where the head is of medium size, but yet unusually elongated. The author believes that the difficulty alluded to had been (how frequently it was impossible to say) encountered in practice by others, though not recognised. To those who would object that, admitting the possibility of the difficulty occurring, it must yet occur very rarely, he would

reply that, admitting the rarity of the occurrence in question, it was extremely desirable that it should be recognised, and that this or any other misconception likely to arise in connexion with the use of so important an instrument as the forceps should be removed. The only modification in the forceps hitherto admitted or insisted upon has reference to the *position* of the head in the parturient passage. No modification having reference to the *shape* of the head has as yet been insisted on. The latter principle was the one he wished to see adopted. The author exhibited to the society an instrument constructed under his directions, the blade of which was 8 in. long (instead of $6\frac{1}{2}$ in. or 7 in.), the curve that of a circle of 14 in. (instead of 10 in. or 11 in.), and identical in other respects with the ordinary short forceps used in this country. The curve more nearly approached that of the French instrument. The instrument thus modified would, he believes, be found applicable in the class of cases now under consideration—those in which the fœtal head is unduly lengthened. The cases requiring it would be easily recognised; the blade of the forceps used as a probe would inform the operator whether the shape of the head required one or the other instrument. The ordinary instrument used in this country was perfectly adapted to all ordinary cases, and it was only a further development of the principle on which that instrument was constructed to insist on the necessity for occasionally employing a forceps of which the blades were by their length and shape suited to the altered length and shape of the fœtal head. In the long, tedious labours of primiparæ the new instrument would be most likely to be called into requisition.

Dr. Graily Hewitt at the same time brought forward one of the original Chamberlen forceps in the possession of the Royal Medical and Chirurgical Society, and which, by the courtesy of the council of that society, he had been allowed to exhibit, in order to afford the fellows an opportunity of comparing it with the instruments in ordinary use, and with the modified form of forceps now suggested.

ART. 152.—*Some practical observations on the timely use of the Obstetric Forceps.* By Dr. E. B. SINCLAIR, Ex-Assistant Physician in the Dublin Lying-in-Hospital, &c.

(*Dublin Quart. Journ. of Med. Science*, Aug., 1861.)

In this paper Dr. Sinclair contends: 1. That the early application of the forceps prevents inflammation of the mother's tissues and its results; and 2. That the free and timely use of this instrument is a powerful means for warding off disease and death, especially in public obstetric institutions.

"With respect to the first assertion," Dr. Sinclair says, "I regret it is not in my power to offer any statistics relative to sloughing of the vagina from authors who are hostile to the free use of the forceps. And it is a curious fact, that some of these very authors *have* published obstetric statistics, and yet are silent upon this subject; they give no account of their cases of sloughing. I can, however, produce the statistics of a gentleman upon this point, who at one period used the

forceps most freely. And premising that the majority of the cases of sloughing occurred during a period when this physician was still prejudiced by old and respected opinions, I think it will be considered, when I have exhibited the figures, that not only is the forceps guiltless of the charges laid against it, but also that there was an extraordinary immunity from sloughing of the soft parts of the mother, during Dr. Shekleton's mastership of the Dublin Lying-in Hospital, and that in consequence of the free use of this instrument. I can answer for the truth of the statistics I produce, they having been published by myself and Dr. George Johnston, in our report of Dr. Shekleton's mastership, and all the facts having been registered at the moment of their occurrence.

"Out of 13,748 deliveries of every description (225 of which were delivered with the forceps), there occurred but 20 cases of sloughing (more or less) of the soft parts; 7 of these happened in deformed pelves after perforation and crochet delivery; 5 occurred in tedious labours, where no instruments had been used; 2 in prolapse of funis, and one in retained placenta; in neither of which the forceps was used, but they were subsequently seized with erysipelas, sloughing, and died—or, 15 cases of sloughing, in which the forceps had not been used; leaving 5 cases only which occurred after forceps delivery—3 of these latter were in single births, out of 200 such forceps cases, all slight, and after long labour: these recovered. There were two instances in twin-forceps-labours, in both after long delay, and one of these died.

"Out of 13,748 deliveries there were only 4 examples of urethrovaginal fistula after convalescence; 2 of which completely closed; one contracted to a minute opening; and in one instance the woman died, subsequently, of peritonitis.

"But had the forceps been used more freely, and much more early, in the first periods of Dr. Shekleton's mastership, I am almost certain that the five cases which occurred in tedious labour, when instruments had not been used, and the five which occurred under the head of forceps deliveries, would not have been recorded.

"That the free and timely use of the forceps is a powerful means of warding off disease and death, especially in public obstetric institutions, I think I can produce strong reasons for maintaining.

"Burns, when speaking of the effect of delay in labour, says, 'There is a strong disposition given to puerperal diseases, not merely to those troublesome though less dangerous complaints known under the name of weids or irregular febrile paroxysms, but also to more formidable affections of an inflammatory nature, especially of the womb and peritonitis; accordingly, we find that a much larger proportion of women die after protracted than after natural labour.' This has been corroborated in an elaborate dissertation by Dr. Simpson, of Edinburgh; and I believe no one will have the hardihood to contradict it. Lessen, then, the number of tedious cases, and it follows that the practitioner shall have a cleaner bill of health, and the minimum of mortality.

"To illustrate this, I shall again consult the statistics of the Dublin Lying-in Hospital; and, for the purpose of more fully proving my

position, I shall divide Dr. Shekleton's mastership into three periods :—Namely, the 1st, during the months of November and December, 1847 ; 2nd, during the years 1848 and 1849 ; and 3rd, from January, 1850, to November, 1854. I have made this division, because during the first period the forceps was not used at all ; during the second, prejudice was merely commencing to yield to common sense ; and at the commencement of the last five years, the necessity of the early application of the forceps was fully appreciated.

"Now, comparing the number of deaths with that of the deliveries and the ratio of forceps cases, during each period, I find the following to be the results :

"During November and December, 1847, there were 242 deliveries, and as many as 17 deaths (to say nothing of cases of disease), that is, one in about every 14 women delivered died : there was no forceps delivery. During 1848-49, there were 3886 deliveries, and but 70 deaths, from all causes, or one in about 55 of those delivered ; and the forceps, during this period, was used 38 times, or once in every 105th case. And during the years 1850 to November, 1854, there occurred 9620 deliveries, of which but 78 died, from all causes, or one in every 123, nearly 124 ; and the forceps was used 187 times, or once in about every 50th case. And were those deaths taken into account only which had originated from puerperal causes, the absolute puerperal mortality would have been one in about 350 of those delivered.

"Comparing the ratio of disease with that of forceps deliveries, and confining ourselves merely to such seizures as may come under the term puerperal fever, I find the following to be the results during these three epochs :

"During the two months of 1847, puerperal fever was rife, Dr. Shekleton having received charge of the hospital during an epidemic ; and all the cases of illness might have been included under that head. This state of the house first induced Dr. Shekleton to lessen his second stages, and was the means of bringing forward the forceps. But during the years 1848-49, when the forceps was used once in every 108 cases, puerperal fever and its allies were in the ratio of one to every 54 of those delivered ; the numbers being 72 cases of puerperal fever out of 3886 deliveries : whereas, during the last five years, when there were 9620 deliveries, and the forceps was used once in every 50th case, puerperal fever and its allied affections were as low as one in every 104 of those confined,—the examples of these affections amounting only to 47.

"As I have spoken of the uncertainty of the rules laid down for the guidance of the practitioner as to the application of the forceps, it may naturally be expected that I should attempt to remove the difficulty, I cannot then do better than present the rules which guided us in our practice during the latter portion of Dr. Shekleton's mastership of the Dublin Lying-in Hospital. These were pretty nearly as follows :

"Time was never taken so much into consideration as the existing state of the woman's constitution, and that of the child's circulation. No system of axioms was laid down defining precisely time and circumstances. The *peculiar nature of each case*, alone, formed the

basis or ground of action. But if we *had any axiom upon which we acted, it was this, and this only*—"in doubtful cases, and where the application was not difficult, the error was on the right side to deliver with the forceps." We never waited for bad symptoms to set in;—experience had taught us to discriminate the cases in which unpleasant symptoms *might be apprehended*; and if we did apprehend them, the labour was cut short without hesitation. If we found the fœtal heart about to fail after ergot, or otherwise, we used the forceps at once. We never perforated without first trying to extract the fœtus by the forceps, and we have successfully used it in slight narrowing of the pelvis. We never required to feel the child's ear, deeming it of no utility whatever; as I have elsewhere observed, it was not felt in the majority of our cases. The above practice is, to a certain extent, corroborated by Dr. Churchill, who, in the last edition of his '*Practical Midwifery*,' remarks—"There are many cases in which, from the character of the labour, it may be certainly foreseen that *these symptoms* (alluding to those which practitioners were formerly in the habit of *waiting for*) will arise, and that the woman will not *previously* deliver herself. In all such cases, I would maintain that the forceps should be used as soon as we feel justified in coming to that conclusion." I may safely add, that acting thus, should we have been subsequently found to have erred, the mistake shall be on the right side. I emphatically assert, and I have had opportunities of forming an opinion, that no harm at least can result in thus acting; that much life will be saved, and much suffering spared to parturient women."

ART. 153.—*On the treatment of Placenta Prævia.*

By Dr. BARNES, Assistant Obstetric Physician to the London Hospital.

(*Lancet*, June 1, 1861.)

"We have," says Dr. Barnes in a clinical lecture recently delivered at the London Hospital, "an ascending series of remedial measures finding their application successively with the rising obstinacy and dangers of the case.

"1st. Detach, with one finger passed through the cervix, all that portion of the placenta which adheres to the cervical zone of the uterus.

"2nd. Tap the amniotic sac, and drain off the liquor amnii. To effect this, some change of posture on the part of the patient—holding the cervix a little free from the presenting head, which sometimes acts like a ball-valve, completely closing the os—and firm pressure on the uterus externally, will sometimes be necessary.

"3rd. If the uterus still remain flaccid, and if hæmorrhage continue, or, generally, where the patient is much exhausted, so that effective muscular contraction cannot be roused, artificial aid is called for in order to accelerate delivery.

"This necessity may arise under two conditions. First, the cervix may be freely expanded. If this be the case, you may immediately turn the child by passing two fingers of the left hand through the cervix, gently yet steadily tilting the head forwards over the pubes,

whilst simultaneously pressing the breech backwards and downwards, until a knee or foot comes over the os within reach, and then hooking this down into the vagina. When the breech is engaged in the cervix you must extract slowly and with care. The breech will thus fully prepare the cervix for the quicker and safer passage of the trunk and head, increasing the chance of life to the child. All this time steady pressure must be kept up on the uterus externally.

"But, secondly, you may have an undilated cervix, with more or less rigidity. This is the condition in which the caoutchouc dilator offers such invaluable service. A bag of suitable size and shape is rolled up and slipped into the cervix either by the fingers or by aid of a stem; it is then to be distended with air or water, so as to put the cervix gently on the stretch. This will act in three ways: it will mechanically stretch the cervix just as the natural bag of membranes will, when driven down strongly by vigorous contractions of the uterus; it will press upon the mouths of the vessels and tend to arrest the hæmorrhage; it will, again imitating the distended amniotic sac, excite the diastaltic function of the uterus by stimulating the incident nerves distributed over the os internum.

"In this manner the energies of the uterus may be roused sufficiently to terminate the labour without further help. If this should not be the case, then you may expect, in a short time, to find the cervix so dilated as to admit of turning in the manner already described. I assume that, throughout, all care has been taken to support the patient by nourishment and stimulants.

"Sometimes the removal of the placenta will be tedious. There are three conditions which may impede the expulsion of the placenta: first, there is the atonic condition of the uterus, so frequently present in these cases, giving rise to actual paralysis, or to spasmodic and irregular contractions; secondly, the uterus is less able to cast off placenta which adheres to its lower zones; and, thirdly, there is a great liability to morbid adhesions. I have, I think, accumulated sufficient evidence to prove that a diseased state of the uterine mucous membrane is a predisposing cause of placenta prævia; and out of this diseased mucous membrane the decidua is developed which is to form a constituent part of the placenta, and to bind this organ to the uterus. If no morbid adhesions exist, you will rarely fail to induce the uterus to throw off the placenta, if you grasp it firmly for some minutes through the walls of the abdomen before you begin to pull upon the cord. If adhesions exist, it may be necessary to separate them with the hand. A firm binder is of especial service in these cases.

"If you bear the leading principle well in mind, that contraction is the end to be secured, and if you bring into successive use the measures I have described, you will, I am confident, experience more success in the treatment of this, one of the most dangerous complications in midwifery, than has been hitherto arrived at.

"The majority of the deaths in placenta prævia arise either from hæmorrhage or from pyæmia. Hæmorrhage you may greatly avert by accelerating the labour by the judicious resort to the separation of the placenta from the lower zone of the uterus, by rupturing the membranes, by pressure externally, and, above all, by the intra-uterine

application of the caoutchouc dilator. Almost all the violence which is the most frequent cause of pyæmia, you may avoid by these accele-rative measures, and by turning when the parts are duly prepared by combined internal and external manipulation.

ART. 154.—*On Transfusion in Hæmorrhage during Parturition.*
By the Foreign Correspondent of the 'Med. Times and Gazette.'

(*Medical Times and Gazette*, May 11, 1861.)

At a meeting of the Obstetrical Society of Berlin, some weeks ago, Professor Martin related the history of a case of transfusion, which operation he had performed on a parturient woman, who had been exhausted by internal hæmorrhage to a most dangerous degree, and which he had repeated after the child was born, and hæmorrhage had again set in with consequent collapse—on both occasions with the most striking success. He thereby furnished a new and very valuable contribution to the history of transfusion, an operation the value of which has not by any means been sufficiently acknowledged, and which has not been so extensively performed as it deserves to be. There are only 57 cases of transfusion on record; an almost incredibly small number, if we consider how often the obstetric physician has need of such a remedy. For among these 57 cases, recovery took place 45 times; while in the remainder other diseases, which had either been in existence before or had set in at a later period, led to a fatal result in 11 cases, and in one only death took place in consequence of the operation. In face of these favorable results it appears strange that the operation has not been practised more frequently; but the fact is, most medical men look upon it as a last desperate effort to save life, and scarcely as more than a mere experiment, which may only then be made when nothing can be lost. Mephistopheles, in Goëthe's 'Faust,' says—

"Blood is quite a peculiar juice,"

and, perhaps, medical men have been afraid that to this "peculiar juice" peculiar dynamic qualities might appertain, which might be in close relation to the mind, and which might be different in different individuals; and they have been fearful of injecting with strange blood also a part of the strange mind, the "anima" in the sense of Stahl; which, no doubt, must be unpleasant to the individual concerned, if such were the case. These and similar objections are fortunately not grounded on experience, but are only productions of speculative minds; and the writer will be glad if the communication of the following case would induce any of his colleagues in England to resort more frequently to the operation mentioned than has been done up to the present time.

CASE.—Mrs. W—, æt. 20, a lady of delicate constitution, and well known in society for her accomplished singing, had the misfortune to be thrown out of a sledge, at a large sledge-party, which was got up in this city on last New-Year's day; she being then at the end of the eighth month of pregnancy.

The symptoms which appeared in the first instance were treated by her medical attendant with laxatives. On January 5th, pains in the abdomen became very troublesome, which he considered to be due to metritis. For these he ordered a venesection; later in the evening of the same day labour was evidently coming on, which he tried to facilitate by ordering the powder of ipecacuanha and a vapour-bath. While the patient was sitting in the latter, a considerable external hæmorrhage took place, which continued after the membranes were ruptured, and augmented the collapse which had already come on. Professor Martin was called in on January 6th at five o'clock in the morning. At this time the patient appeared very pale, the eyes were deep in the sockets, the features haggard, the skin cool, the pulse small and frequent. The os was rigid and hardly an inch in diameter; the head was deep in the pelvis, the fundus uteri was felt in the epigastrium, was tense and sensitive to pressure; the pains were rare and inefficacious. The kolpeurynter was now introduced in order to cause dilatation of the os; but all endeavours to restore the lost strength by the administration of beef-tea, eggs, wine, &c., failed, as the patient vomited everything immediately after having taken it. At the same time she complained of increasing tension of the abdomen and extension of the fundus uteri; which latter appeared to be more pointedly prominent. Delivery by turning could not be undertaken, on account of the rigidity of the os, and the deep position of the head. The life of the mother was, however, evidently endangered by internal hæmorrhage, as the pulse was scarcely perceptible, and the patient became anxious, faint, and began to sigh. At eight o'clock in the morning, Professor Martin determined to perform transfusion, in which he had great confidence, as he had already successfully practised it on another occasion. A strong, healthy man was soon induced to allow venesection to be performed upon him. This was done by Professor Martin's assistant, Dr. Strassman, while the professor himself made an incision in the skin above the vena mediana, and then pushed the trocar into the fixed vein. The blood, which had been received in a cup surrounded by water, at a temperature of 100° Fahr., was immediately drawn into a glass syringe, which had previously been gently heated, and was then injected into the canula of the trocar. This process was repeated five or six times, and altogether five to six ounces of fresh blood, which had not been defibrinized, were injected into the vein of the patient. The syringe was continually held upright, so that the air-vesicles which entered with the blood arose against the piston of the syringe. Even while the operation was being performed, the lady showed signs of returning consciousness, her cheeks regained a little colour, and the pulse became stronger. The labour now became more effective, and the os was more dilated, so that at ten o'clock in the morning the forceps could be applied; and the child, which had been dead for some time, was extracted. The placenta immediately followed, and with it about two pounds of black, clammy blood; the external part of the placenta showed evident signs of compression on two thirds of its surface, so that no doubt could be entertained about its having been separated for a long while from its place of insertion, and effusion of blood having taken place at the same time with it. At first the patient seemed pretty well after the uterus had been emptied, and the fundus contracted satisfactorily; but a quarter of an hour afterwards a fresh hæmorrhage took place, which, although soon stopped by the administration of secale cornutum and cold injections, still left such a degree of weakness that the patient began again to vomit medicines and food, and lost all consciousness. At the same time the pulse disappeared, and the extremities were covered with cold perspiration, so that death was evidently imminent. Shortly after eleven o'clock, a.m.,

Professor Martin made transfusion for the second time, and now with the blood of another healthy young man, twenty years of age, into the *vena cephalica dextra*, into which about two ounces of fresh blood were injected. The patient immediately rallied, and after some beer and Spir. Ferri Chlor. Æth. and Tinct. Chin. compos. had alternately been given, sleep ensued at one o'clock in the afternoon. The patient was then in a copious perspiration, and on awakening in the evening seemed calm and in good spirits. As there was a high degree of anemia, and the lady was of a delicate and irritable constitution, her recovery was protracted over some weeks; but it was complete towards the end of February.

Several years ago Professor Martin performed transfusion under similar circumstances, with equally beneficial effect; and the case just described has given a fresh proof of his skill and resolution under most difficult and trying circumstances. It is scarcely necessary to make any further remarks on this case, as it speaks for itself. Twice the life of the patient was endangered to the last degree by repeated hæmorrhages, and all stimulants and food had been given in vain; and twice transfusion saved life. In this as well as in other similar cases the rapid and favorable effect of transfusion was immediately manifest, even while the blood was being injected, by the return of consciousness, the stronger pulse and the reappearing colour of the cheeks, so that there could not be any doubt as to the truly reviving influence of the operation.

In conclusion, the writer directs attention to a brochure on transfusion, recently published by Professor Martin, in which this eminent physician, proceeding from a previous case which had occurred in his practice, has fully developed his views on the indications, the effect, and the mode of performing the operation; and in which he has also given a tabular view of all cases of transfusion which have been published, together with diagrams of the instruments used by him. The title of this brochure is 'Über die Transfusion bei Blutungen Neu-Entbundener,' Von Professor E. Martin. Berlin, 1859.

ART. 155.—*A practical inquiry whether Ergot of Rye, administered to the Mother during Labour, is dangerous or not to the life of the Child.*
By Dr. R. UVEDALE WEST.

(*Medical Times and Gazette*, July 20, 1861.)

In December, 1855, the author published the particulars and results of an inquiry similar to the present—to the effect that, in a series of 69 cases in which he had administered the ergot of rye on a gross total of 278 labours, 9 children were stillborn, viz., 2 putrid at birth; 2 born after labours which were preceded and accompanied by hæmorrhage; 1 born footling, with hydrocephalic head and consequent fatal compression of funis; 1 in which there was evidence of latent compression of funis; 1 a difficult primiparous forceps delivery; 1 a difficult vectis delivery, the mother seriously ill from excessive œdema; and 1 born dead without any assignable cause. In consequence of certain criticisms on this paper which were published in France, accounting variously for the results and challenging the author to continue the inquiry

on the same plan, one of the critics, Dr. Danyau, on the part of the Imperial Academy of Medicine, maintaining that, unfavorable though the results appeared to be to him, yet a similar report on a like number of cases would probably be more unfavorable still, Dr. West continued to tabulate his ergot cases as he had begun, with the following results:

Between December 23rd, 1855, and June 22nd, in the present year, on a gross total of 734 labours attended by the author, the ergot was given in 172 cases, including 1 case of twins, so that there were 173 children born under the effects of ergot of rye. Of these only 5 were stillborn from all causes—viz., 3 putrid at birth; 1 with placenta prævia and profuse hæmorrhage—premature; and 1 with prolapsed funis, detected an hour after the ergot was given, the operation of turning, which was then immediately performed, having been too late to save the child's life. The author urges that, in reply to Dr. Danyau's precise challenge, he might fairly have rested contented with the results of the first 69 cases of this second series, in which there was not a single stillbirth from any cause; but he considered that that fact, when compared with the unfavorable result of 9 stillbirths in the preceding series of 69 ergot cases, proved only that 69 was too small a number to form a correct conclusion from, and therefore he went on with the inquiry until it was spread over a gross total of 1013 labours, on which number the ergot was given in 241 cases. Of that number of 241 ergot cases, including 242 children born, there were, adding the 9 of the first series to the 5 of the second, 14 stillbirths from all causes—viz., 5 putrid at birth; 1 footling; 1 prolapsed funis; 3 hæmorrhage during labour from placenta prævia; 2 difficult instrumental deliveries; 1 suspected latent compression of the funis; 1 cause not manifest. On the whole number of births—1013 labours, and 1029 children born, including the series without ergot as well as that with ergot—there were 50 stillbirths, of which 5 were born dead without any manifest cause. So that, inasmuch as only 1 of those 5 was born under the influence of ergot, that medicine having been given in the greater proportion of 1 in $4\frac{3}{4}$ of the whole number of labours, the author thought there was no sufficient evidence in the facts he had accumulated to justify the doctrine that ergot of rye was dangerous to the life of the child. As to the mother, the author finds the following results on a retrospect of the gross number of 1013 labours—viz., 7 deaths within the lying-in month, of which 1 occurred with a patient who had had ergot of rye; 18 cases of incarcerated placenta, of which 5 were after ergot of rye; 25 instances of post-partum hæmorrhage, of which 5 were after ergot of rye; 30 cases of puerperal disease or disorder, of which 9 were after ergot of rye. So that he is led to the conclusion that ergot has little or no influence in either causing or preventing parturient or puerperal accidents or diseases. At the same time he remarks that probably in proportion as ergot might improve uterine action, certain accidents which depended on deficient uterine action, such as post-partum hæmorrhage and after-pains, might be controlled by ergot of rye. The author concludes with the observation that his statistics appear to prove that it is immaterial in what stage of the labour the medicine was given; whether the os uteri was rigid or supple; whether the

liquor amnii was or was not evacuated; or whether the mother was multiparous or primiparous; but that it is essential that actual labour should be present, as well as that the accoucheur should be competent to meet any emergency that might arise, just the same as when ergot has not been given; that ergot was useful wherever it was desirable to improve uterine action; and that it could be dangerous only where uterine action would be dangerous, as, for example, in a case of arm presentation after the liquor amnii was evacuated, as then it would make turning more difficult.

**ART. 156.—*A case of Rupture of the Uterus terminating successfully.*
By Dr. EDMUNDSON, of Carrick-on-Suir.**

(*Dublin Medical Press*, July 10, 1861.)

CASE.—On the 14th of May I was called on to visit A. D—, a poor woman living in my dispensary district. On arriving at the house I received the following brief history of her case. She had been in daily expectation of her confinement, and on the day previous ventured some ten miles from home to dispose of some trifling effects. In the evening, when returning, her labour commenced; the pains through the night and towards morning were very severe. At about twelve o'clock at night the membranes gave way, and the liquor amnii escaped, the head descending rapidly into the pelvic cavity. From about one a.m. the position of the head remained unaltered, not being affected by the pains, although the latter increased both in frequency and strength. At five a.m., after a strong pain, she fainted; vomiting set in, accompanied with great soreness and tenderness in the left side of the abdomen, and excessive weakness. Immediately after the pain there was a slight gush of flooding, but the head did not recede, at least perceptibly to the nurse. I was not sent for until half-past eleven, and consequently did not see her until nearly six hours after the occurrence. She then presented the following symptoms:—she lay on her back in bed, incapable of making the slightest exertion, with her knees partly drawn up, her countenance expressive of pain and great anxiety, pallid, and covered with slight moisture, her pulse very small, wiry, 130 beats per minute. The head presented in the first position, and was impacted in the pelvis. There had been no recurrence of uterine action since she fainted this morning. On removing the clothes, in order to make a careful examination of the abdomen, my attention was immediately arrested by a projecting point, flattened on the top, and raised some two inches above the natural line of the abdominal surface, situated about two inches to the left, and a little above the umbilicus. The tenderness and pain was very severe and confined to the neighbourhood of the tumour. On examining the projecting part, I had no difficulty in very plainly tracing the outline of a foot, the sole of the foot forming the flat termination which I have already described, and by exercising slight lateral pressure I could not only trace the entire outline of the foot, but without difficulty grasp it below the ankle-joint, having only the distended abdominal coverings between it and my hand. It was quite clear that the foot had escaped through the uterus, and formed the tumour. The bladder was greatly distended, not having been emptied for several hours. After relieving the bladder by catheterism, I cautiously introduced the forceps laterally, but could not get them to lock. I then withdrew them, and after an interval of rest, I attempted the introduction antero-posteriorly, which appeared after examination to offer

some faint chance of success; however, I only succeeded in introducing one blade, and was obliged to desist after two fruitless attempts. I then opened and reduced the head, but had to remove both parietal bones and the greater portion of the occipital before I could accomplish delivery, which was followed by a good dash of flooding, as in consequence of the severe abdominal tenderness I could not exercise any pressure over the uterus. The placenta came away while my hand was passing through the vagina for the purpose of removing it. The uterus contracting satisfactorily, I gave her a full dose of opium, and ordered a bran poultice to the abdomen, and left her in a great state of exhaustion. On the 15th the peritonitis had extended over the abdomen, from that to the 17th her condition continued unchanged. At eleven p.m. on the 17th, I considered her case to be perfectly hopeless; her pulse was very small, and so quick that I could not count it; her eyelids drooped, half closing the eyes; her features wore the expression of death. The temperature of the body was low; she could swallow liquids, but could not speak, and appeared unconscious of those around her. I increased the quantity of stimulants, and ordered jars of hot water to the feet and the region of the heart, and left, not expecting to see her alive in the morning.

About midday on the 18th, I was requested to visit her, and was astonished to find all her symptoms improved. From this period she continued gradually to progress until the 11th of June, when no trace of her illness remained, except general debility.

The patient was about forty years of age, and when in health always had a sallow, delicate appearance; her frame was well formed, but there was a general want of muscular development; she was mother of six children, and her previous confinements had been natural and favorable. The rupture was, no doubt, caused by severe and long-continued labour-pains acting on, and resisted by, an impacted head, and there was probably a preternatural thinness of the walls of the uterus, leading me at first to the supposition that both feet had escaped, for I could trace a portion of the second foot lying about three inches to the right of the umbilicus; but after careful examination, I was satisfied that but one foot and a portion of the leg had passed through the uterus. Whilst extracting the legs of the child, I met a sudden check which caused pain and a dragging sensation to the mother, I have no doubt caused by the foot being hooked in the rent in the uterus, for by turning the leg, and thereby changing the position of the foot, it came away without further trouble. The latter fact, and so small a portion escaping through the uterus, leads me to believe that the rent was small. I almost regretted that the placenta came away, for had it not it would have given me an opportunity of ascertaining the exact extent of injury done to the uterus, which, under existing circumstances, I was not justified in doing. The measurements of the pelvis were correct, but the head was unnaturally large.

I attempted the use of the forceps, believing it *possible* the child might be alive, although I could not detect any stethoscopic signs of life. The stage of collapse had gone off when I first visited her, and well-marked peritonitis had set in. Excessive prostration continued all through. I depended on full doses of opium (one grain) every two hours, supporting the system with beef-tea, chicken-broth, and weak wine-and-water. I omitted the use of calomel, fearing its depressing effects. I did not think her capable of bearing local bleeding, her state contra-indicating the use of leeches. The only external applications used were bran poultices and hot fomentations, with turpentine to the epigastrium, to assist in allaying the vomiting, which was distressing. The bowels were obstinately confined, but I abstained from the use of aperients until the 20th (six days after the accident), I then gave a

dose of oil and turpentine, which had the desired effect. On considering the position of the rupture—the discharge of the liquor amnii having taken place before it—and the fact that the patient had been on her back at the time of the accident, and had continued so until I visited her, I was induced to keep her in the same position, and by drawing her hips well over the edge of the bed, and having the thighs flexed and supported by an assistant, I had no difficulty in using instruments. This may perhaps have had a favorable effect on her future state, by preventing to a great extent the escape of fluids through the rent in the uterus into the cavity of the abdomen.

This is the third case of ruptured uterus I met with, in the two former ones the entire fœtus escaping into the cavity of the abdomen; in both cases I introduced my hand through the rent, searched for the feet, turned, and delivered, but in both death ensued after a few hours. This being one of the few fortunate cases which has terminated successfully, induces me to report it.

ART. 157.—*Report on the cases of Extra-uterine Fœtation extending beyond the full period of pregnancy.* By MR. JONATHAN HUTCHINSON, Assistant-Surgeon to the London Hospital, &c.

(*Medical Times and Gazette*, July 21 and 28, and Aug. 4 and 11, 1861.)

From an analysis of 102 cases of extra-uterine fœtation, in which the life and growth of the fœtus were prolonged to the full period of gestation, Mr. Hutchinson concludes that the facts in favour of the secondary abdominal section—an operation, that is to say, consisting in the enlargement of an opening already made by ulcerations, are conclusive; and that the proper course is to wait until spontaneous ulceration has occurred, and until there is a probability of adhesion having formed, in cases where the fœtus has been dead some time and where no evidence of suppuration is present. He concludes, also, from the same facts, that it is the wisest course to leave the placenta to be detached spontaneously, unless it be quite loose.

ART. 158.—*On the employment of Electricity in a case of retained Placenta.* By M. KÜHN.

(*Gaz. Heb. de Méd. et Chir.*, Sept. 13, 1861.)

At a meeting of the *Société de Chirurgie* of Paris, held on the 11th of September, 1861, M. Béraud related a case occurring in the practice of M. Kühn, in which electricity would seem to have been used with the best results in a case of retained placenta from inertness of the uterus. The patient was the mother of several children. The birth of the child in the present labour was natural, but tardy. The ordinary means for procuring the expulsion of the placenta were tried fruitlessly for eighteen hours, and then M. Kühn resolved to have recourse to electricity. The apparatus used was that of Legendre (an apparatus furnishing induced currents), one pole being introduced within the cervix uteri, the other being applied, externally, to the abdominal parietes; and the result was that the current had hardly

begun to pass before the uterus contracted and the placenta was expelled. The ordinary silver uterine sound was made to serve for the pole introduced within the cervix uteri.

ART. 159.—On Decapitation, and Instruments for Decapitation.
By M. SCANZONI.

(*Medical Times and Gazette*, May 25, 1861.)

Many physicians who have seen thousands of cases have never been forced to resort to decapitation; and yet it cannot be doubted, that there will always be a few cases in which, in spite of the strong disinclination of the practitioner to such operative proceedings, and even when using all the means at our disposal in consequence of the modern development of midwifery, no other way of saving the life of the mother exists than the mutilation of the child and the gradual extraction of parts of its body. M. Scanzoni considers these to be such cases in which we have to do with transverse presentations, when no medical aid has been rendered at the right moment, so that, in spite of internal remedies, of the administration of chloroform, and the adoption of a lateral or knee-elbows-position, turning upon the foot becomes impossible. In such cases we have, unless we choose to await the process of spontaneous expulsion, which is very doubtful, and even when it takes place is always connected with great danger to the mother, only the alternative of either performing decapitation or embryulcia, that is, the opening of the cavities of the chest and the abdomen, and extraction of the viscera, in order thus to diminish the size of the trunk of the child and to pave the way for the hand in the cavity of the uterus, in order to perform turning.

M. Scanzoni, who has never been called upon to do either of these operations, prefers, generally speaking, decapitation, with the exception of such cases in which the peculiar position of the child renders the neck absolutely inaccessible to the instruments—cases which, on the whole, must be exceedingly rare, as it is the rule that in neglected or badly treated transverse presentations the presenting shoulder of the child is deeply pressed into the pelvis, and the neck is so close to the inlet of the pelvis that it is possible to put a blunt hook over it, and, by a powerful traction with the instrument, to bring it down, so that it becomes accessible to the cutting instruments which are afterwards to be employed. If such, however, is the case, decapitation is evidently preferable to embryulcia, and for the following reasons:

In the first place, the danger to the mother is far less, if merely the neck of the child is severed, than if embryulcia is performed, and instruments, in the form of knives and scissors, are repeatedly introduced. Besides, we can never be certain that the sharp edges of the ribs, after they have been cut through, will be so covered by the integuments that they may not, if the body is afterwards extracted, penetrate into the soft parts of the pelvis of the mother, and thus produce new dangers by one or more wounds; while, after decapitation, the neck presents a perfectly smooth surface. It is also to be consi-

dered that, after embryulcia has been done, turning on the foot must still be performed—an operation which, if the uterus is firmly contracted, is in itself most dangerous, even when, by the diminution of the size of the trunk, the way has been paved to the feet. If, on the contrary, decapitation is done, the evolution of the trunk by one or both arms, which generally hang down into the pelvis, cannot be connected with dangers or difficulties. With regard to the plan of not only opening the cavities, but also severing the vertebral column, so that the child is divided into two parts, such a manœuvre is certainly a great deal more troublesome and dangerous, besides being connected with loss of time, than severing the neck.

One point only seems to be in favour of embryulcia, and that is, that after decapitation and extraction of the trunk have been successfully performed, the extraction of the severed head, which remains in the cavity of the womb, may still be difficult. But if we consider that we now possess in the cephalotribe an instrument which has repeatedly been used with the greatest success for the extraction of the head after this had been cut or torn off, so that there is no longer any necessity for using the pointed hooks which were formerly so much employed, and which often produced wounds of the uterus, the last objection for preferring embryulcia to decapitation falls to the ground.

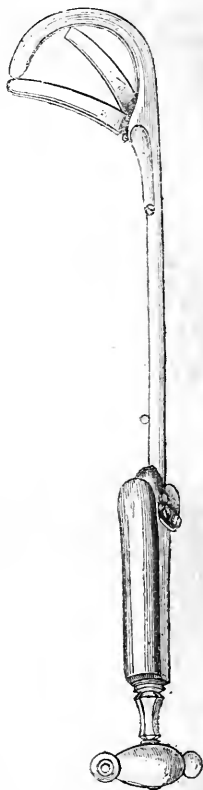
The reason why there are still many experienced obstetric physicians who are not decided for preferring decapitation, may be that this operation, as it has been practised until now, is always connected with so many inconveniences, that it still belongs to the most difficult and dangerous operations in the whole range of midwifery. A sharp, blunt-pointed hook was usually employed for this purpose. This was conducted over the neck of the child, and severed it by gradual traction. Even the introduction of this instrument into the vagina and the uterus was connected with evident dangers, which increased while the neck was being severed, as in this stage of the operation an entire command of the instrument was not certain, and it sometimes happened that the edge, after having cut through the vertebral column, suddenly penetrated the other soft parts, and thus not only wounded the soft parts of the mother but also the hand of the operator then in the vagina. This accident was sought to be avoided by employing a strong pair of scissors bluntly pointed with a long stem, instead of the sharp crotchet. But even this proceeding did not entirely answer the purpose, partly because scissors with a very long stem are not easily manipulated, and the vertebral column could only with difficulty be penetrated by them, and partly because the neck, even when lying quite near the inlet of the pelvis, was not always immediately above it, so that, before it was possible to use the scissors it was necessary first to bring the neck down to the inlet of the pelvis by means of a blunt hook, and to fix it there; and in that case the scissors could not be used, as there was no room for the employment of both instruments. The consideration of these inconveniences of the methods in use led M. Charles Braun, professor of midwifery at the University of Vienna, to the idea of performing decapitation without any cutting instruments; and he invented for this purpose his so-called key-hook,

an instrument which has several times been used with advantage, but is still open to the objection that, in the moment of the hook being turned round its axis, the head of the child is forcibly pressed forwards, and the upper part of the chest pressed downwards, or inversely. If this be done, as may easily be seen in operating on a model, it must be confessed that the head being pressed with a certain degree of force against a portion of the parietes of the uterus, may easily effect a rupture or at least a contusion of the latter, which is also by no means devoid of danger. A rupture is so much the more likely to occur in cases of this kind, as decapitation is only resorted to when the uterus is firmly contracted, and turning is therefore impossible. Considering these circumstances, Scanzoni has invented an instrument which should avoid the dangers inherent to the contrivance hitherto used, while it should, at the same time, easily and safely effect the severance of the neck of the child.

This instrument, which he calls *Auchenister*, is of the shape of a blunt hook furnished with a handle. It measures fourteen inches from one end to the other, and consists of four parts: of the real hook, the sheath of the knife, the contrivance for putting the knife into motion, and the handle.

1. The *hook* has a length of twelve inches, and is so constructed that its curvature measures about six and a half inches. A groove runs from the point of the hook to the lower end of the pole; on the concave side of the curvature this groove is narrower, but it widens on that part of the pole which is opposite to the point of the hook to three lines.

It preserves this width along the course of the pole, and becomes four and a half lines wide at the lowest part of it, which is four inches long. Along its whole length it is three lines deep, and has a slightly rounded bottom. Opposite to the point of the hook the edges of the groove rise, so that the pole is in this part seven lines thick. In the middle of this thicker part, which is destined for the reception of the sheath of the knife, there is a hole furnished with a screw. One inch below this hole there is a moveable plate, which serves to cover the screw, which is pushed into the hole. At a distance of two inches nine lines from the end of the pole there is a little prominence for fixing the pole in the handle, and two similar prominences are on the plate which closes the pole, and which has a groove five lines deep and three lines broad for the reception of the contrivance for putting the knife into motion.



2. The *sheath* which incloses the knife consists of two blades, is two inches long, four lines broad, and two and three quarters lines thick; it is slightly curved and closed at that end which is turned towards the point of the hook, while the other end, which has the form of a segment of a circle, is open, receives the base of the knife, and possesses five teeth, which correspond to the five incisions on the driving pole. The *blade of the knife*, the form of which corresponds to the sheath just described, is one inch eight lines long, four lines broad, and has at that end where it is joined into the pole of the hook a segment of a circle furnished with seven teeth, corresponding to the smaller deepenings on the driving pole, which will now be described.

3. The *contrivance for moving the knife* consists of a pole nine inches nine lines long, which is slightly rounded on three sides, and on the fourth side plain, and which fits into the groove of the pole of the hook. Its upper end is for about six lines rather pointed, and has there three transverse prominences, which are a little more than one line long, and in the grooves of which the teeth of the knife fit. Two lines below the last little prominence there are five larger ones, which occupy the whole breadth of the pole, and in the recesses of which the teeth of the sheath of the knife, and partly those of the knife itself, fit; one and a half lines below the last prominence, the pole shows a transverse incision, which corresponds to a similar incision on the pole of the hook, and is meant to show how high the driving-pole is to be pushed into the groove at the moment when the sheath and the knife are joined to the part to which they belong. Three inches nine lines from this transverse incision, on the flat side of the driving-pole, there is a somewhat prominent knob, which is meant to prevent the pole, when put in motion, from gliding back more deeply than is necessary for the complete severance of the neck. At the lowest end of the driving-pole, at a right angle, there is a prominent ring three lines broad, one and a half line thick, which has at its anterior surface windings of a screw one line wide, to receive the screw, which puts the pole, the sheath, and the knife in motion. The screw itself has a transverse handle of wood.

4. The *handle of the hook*, which is likewise made of wood, is three and a half inches long, one inch broad, and seven lines thick. At the upper end of its border there are prominences; and a groove runs along it for receiving the pole of the hook and the driving-pole, both of which are fixed in their position by a moveable metal plate laid transversely across the groove.

In using the Auchenister, it is of the greatest importance to lay the curvature of the hook in such a way over the neck of the child that the point is perfectly free and is under the control of the hand which conducts the instrument. When this is done, a strong traction downwards is made by the hand holding the handle, in order to bring the neck as much as possible towards the middle of the inlet of the pelvis; and now, while the hand in the pelvis fixes the instrument, and draws it as much as possible and without interruption downwards, the screw is put in motion. This draws the driving-pole gradually downwards towards the handle, so that at last the greater prominences of it come

between the teeth of the sheath of the knife and the blade, and move these parts in such a manner that their free point approaches the point of the hook. When the two points meet, a careful examination must be made, whether the neck is caught by the curvature of the hook and the sheath of the knife; and if this be the case, the turning of the screw is continued. This, again, draws the driving-pole downwards, which causes the smaller prominences on it only to close in the grooves which are between the teeth of the blade, by means of which, the sheath remaining fixed, the blade is so moved that its edge continues to penetrate the neck of the child, and at last cuts it quite through. The point of the blade is then received by the furrow which is at the concave side of the curvature of the hook, so that it is quite impossible to wound the soft parts of the mother. It may be remarked, also, that the neck of the child is completely severed as soon as the prominence, in the form of a knob, on the driving-pole has arrived at the upper edge of the wooden handle, by which, of course, every further movement of the knife is rendered impossible. The whole instrument is at last firmly pulled downwards, so that its upper part passes between the head and the trunk, after which the decapitation may be considered finished.

Until now this instrument has not been used in parturient women, but only on the occasion of operations made on the model, and on dead bodies of children; but it was easy to convince oneself in these instances of the security and safety of the operation. Besides, we have heard that it has twice been successfully employed on a patient by Professor Walter, of Dorpat.

ART. 160.—*What is the general success of Ovariectomy?*

By Mr. T. SPENCER WELLS, Surgeon to the Samaritan Hospital, &c.

(*Medical Times and Gazette*, May 25, 1861.)

After relating three cases in which he has lately operated, Mr. Wells asks, "What is the general success of ovariectomy?" and then answers it by saying, "If I were to exclude the fatal cases in my own practice which were regarded by myself and others in consultation as unfavorable before operation, I might say that I had scarcely lost a single case; and my experience of those cases which may be regarded as favorable is bringing me to the conclusion that ovariectomy is one of the most successful of our capital operations, and not very much more dangerous than a simple tapping."

"Taking favorable and unfavorable cases together, the following is the general result of my experience of the operation in hospital and private practice:

	Cases.	Deaths.	Recoveries.
Hospital	14	5	9
Private	10	3	7
	<hr/> 24	<hr/> 8	<hr/> 16

"I need hardly say that amputation of the thigh, ligature of the

larger arteries, lithotomy in the adult, and other capital operations called 'legitimate,' show a general result less favorable than this operation, which is still stigmatised by some writers as 'unjustifiable.'"

ART. 161.—*On Saccharine Fermentation in the Milk within the breast of the Mother.* By Dr. Ginn.

(*Archiv. of Med.*, vol. ii, No. 3, 1861.)

Vogel announced the discovery of vibriones in human milk, in a paper published in 'Schmidt's Jahrbucher,' in 1853. He clearly proved that these animalcules were developed within the mammary gland, from the fact of their being seen in the milk on the instant of withdrawal. He believed them to be the result of fermentation in the milk itself, the result of congestion and increased heat in these organs, connected with general excitement of the sexual system. Vogel's theory of their formation was combated by the observation that, as the milk containing them was either alkaline or neutral, and not acid; were there fermentation, it was argued, the evolution of lactic acid would immediately destroy the infusoria.

"In the latter part of 1854," says Dr. Gibb, "I was induced to make some researches into this important question, from the circumstance of an infant being brought to me, seven weeks old, in the most extreme state of emaciation, whose mother had the appearance of the most perfect health. The child, although merely skin and bone, was healthy and plump at birth, and on very careful examination no disease could be discovered. It had never been satisfied with the large amount of milk it received, but was ravenous, and had to be spoon-fed besides. This was a first child, and the mother seemed the *beau idéal* of an excellent and healthy nurse. The child had no diarrhœa, but the most profuse diaphoresis and diuresis had worn it to a shadow.

"What was the cause of this? An examination of the milk, carefully made, at once furnished the clue. It was rich in cream, neutral, sp. gr. 1032, and showed the presence of a large quantity of sugar. So far it seemed normal. Examined under the microscope with a high power, seven hours after withdrawal, it revealed myriads of living animalcules, those indeed known as *ribrio baculus*, but which I venture to change to *ribrio luctis* as more appropriate. These were, to my mind, unmistakably the result of fermentation of the saccharine element in the milk, and might be owing to the large quantity of sugar present; but whether occurring in or out of the breast I had yet to determine. The next day I examined the milk as drawn from the breast, and found the *vibriones* present as before, incontestably proving that the fermentation took place within the gland, as I had previously believed. There was an absence of mammary congestion and heat, but much sexual excitement, which it became necessary to control by moral and suitable medical treatment.

"I did not altogether order the child to be weaned, but prescribed a diet with plenty of good cow's milk, and occasionally the mother's milk, which it did not seem prudent to stop altogether. From this time the improvement began; the extreme action of the skin and kid-

neys ceased, the secretions became normal, and in a few weeks the child had become fat and hearty, and after a time was wholly weaned. The mother's condition also improved; but the milk always remained neutral, its specific gravity varying from 1032 to 1035, very rich in sugar, and containing the animalcules for some weeks. The richness of the milk became less as the child was gradually weaned, when it assumed a bluish tint. As quantities of it were drawn artificially, I had many opportunities of examining it with other specimens of milk, and the general result of my experiments went to prove the presence of a large amount of sugar, and that it turned sour much sooner than cow's or healthy human milk.

"From 1854 up to the present time I have examined many hundreds of specimens of human milk, chemically and microscopically, and have occasionally found two genera of animalcules to be present, in that secreted from the glands of those whose general health was disordered from various causes during lactation, or where the process of lactation itself was unusually prolonged, or again where the quantity secreted was small and wholly insufficient to satisfy the wants of the infant. In some persons, at an early period of lactation, wherein the supply of milk was abundant and rich, and where the constitutional symptoms were similar to those mentioned in the case I have briefly referred to, the two varieties of animalcules were present, but not in the same individual. These creatures consisted, first, of the true *vibrio lactis*, as I shall call it, resembling little rod, or minute hair-shaped bodies, and similar to those found in some of the other fluids of the body, a minute description of which it is not necessary that I should here go into; and, secondly, of monads, which I have found to be far more frequent and common than vibriones, their diameter varying in different specimens of milk, but ranging from the 3000th to the 5000th part of an inch. I am not aware whether they have been before discovered in milk, at any rate I purpose calling them *Monas lactis*. * * *

"Now, with regard to the fermentation within the breast, it may be observed that this process seems, to my mind, to be a fact that cannot be disputed nor ignored by any of the objections which have been brought forward elsewhere against it. This act I would place in the sugar itself, as, indeed, the only element likely to produce it; and I hold the opinion that the act of fermentation of the sugar need not necessarily give rise to the formation of lactic acid. Admitting that it may even do so, the lactic acid thus formed would exist in too small a quantity to produce an acid reaction in comparatively such a large quantity of milk, in some cases. And as the milk has never been acid in any single instance in which I have had the opportunity of examining it, I infer that there must be either no lactic acid at all or that its quantity must be exceedingly minute. And again, these animalcules are commonly found in alkaline fluids in other parts of the body, and if the evolution of lactic acid went on to any extent they would be destroyed. In some experiments performed by Berthelot (recently detailed in the 'Comptes Rendus'), he was enabled actually to produce fermentation of cane sugar in an alkaline liquor which entirely excluded the influence of an acid. The rapidity with which the milk containing these animalcules is decomposed and turns sour, after its withdrawal

from the breast, generating a large quantity of lactic acid, is an additional proof of fermentation having commenced within this gland, which at first gives rise to their vitality, and then their destruction by the subsequent chemical changes which the sugar undergoes, in which lactic acid now plays an important part.

"The process of fermentation within the body, and I may also say out of it, is as yet so little understood, that I may be excused if a more rational explanation has not been afforded for its occurrence in the breast than that I have ventured to give. The glucogenic function plays such an important part in the animal economy, especially in relation to histological phenomena, that it seems to be the one at fault in this condition of the breast. To use the words of Bernard, 'as soon as it fails to be supplied, epithelium is no longer produced; various diseases are the immediate result; and, under similar circumstances, life is inevitably brought to a close.'

"It has occurred to me that these animalcules may be generated from the surface of the mucous membrane of the lactiferous tubes, by the fermentation of the sugar at the moment of its secretion from the blood, and hence the explanation of the large number, of monads especially, found in the milk thus affected; they are sometimes adherent and clustered around the milk-globules. The necessary connexion which subsists between the mammary glands and uterine organs in the body satisfactorily explains the existing influence of the latter upon the former, in producing much heat and internal congestion through reflex nervous agency; these glands become morbidly irritated, as it were, and cause slight fever. But this is usually at the early periods of lactation only, although I have seen it in prolonged lactation, when not unfrequently the vision becomes impaired, and in one female thus affected a shade of yellow was seen by one eye and green by the other.

"In conclusion, it remains for me to add that when an infant is observed to become extremely emaciated, accompanied by copious exudations from the skin, intestinal mucous membrane or renal organs, separately or combined, and if the mother is apparently healthy, with a good supply of milk, examination becomes a matter of urgent necessity, and if it is found to contain any infusoria it must be gradually dispensed with, and such measures adopted as shall arrest the starvation of the child."

(II) CONCERNING THE DISEASES OF WOMEN.

ART. 162.—*On Inflammation of the Breast, with an analysis of seventy-two cases.* By Mr. NUNN, Assistant-Surgeon to the Middlesex Hospital, &c.

(*Proceedings of the Obstetrical Society of London: Lancet, June 22, 1861.*)

Of the total number of 72 cases which had fallen under the author's observation in his public practice at the Middlesex Hospital and elsewhere, 58 occurred during lactation, 7 during pregnancy, and 7 in women neither pregnant nor lactating. Of the 58 lactating cases,

56 to 57 per cent. occurred during the first two months of lactation, during the subsequent seven months only 14 per cent., but after the ninth month 29 per cent. There was a special cachexia brought about by over-lactation, the proneness to inflammation being an indication thereof; a cachexia marked by a peculiar dryness and chalkiness of the skin; by drowsiness, constipation, dyspepsia, loss of appetite, and tendency to incontinence of urine; and by physical and mental lethargy—remarkably by the latter, the task of weaning appearing to the patient to be one of insurmountable difficulty; the breasts themselves becoming preternaturally bulky and inelastic, and the peripheral portions of the lobes being most engorged.

The author argues that it is probable that the attacks of inflammation of the early period and of the hyper-lactating period had an analogous if not similar etiology, and that the treatment which experience had proved most successful was thus rationally confirmed.

The results of Mr. Nunn's observations as to whether the right or left breast is the most frequently attacked coincide with those of M. Velpeau—namely, that either breast is equally liable.

In twenty-six instances observation has been made by the author as to which portion of the gland contained the focus of inflammation, and it is found that the lower lobes are twice as often thus affected as the upper lobes.

Regarding treatment, Mr. Nunn argues, or rather hints—

1. That the continuous poulticing so often practised or permitted was decidedly mischievous, and hindered recovery, although it was not denied that occasionally, where there was deep sympathetic pain and hyperæsthesia of the surface, large, warm poultices were soothing and grateful.

2. That the recumbent position, by preventing the undue infiltration of the lower lobes of the gland, was of the first importance.

3. That in the author's hands belladonna had not given encouraging results, although he could not doubt, from the evidence of Mr. Marley and others, that in the earliest stages of congestion and as a preventive it had a beneficial influence.

4. That the moment for making the incision in the abscess, when formed, should be vigilantly watched for, as the rapidity of cure much depended upon this. That the extent of the incision should be such as to ensure efficient evacuation of the abscess, but nothing further.

5. The author strongly advocated the employment of galvanism of low intensity, such as is afforded by the ordinary single-cell apparatus for yielding the interrupted current, in the treatment of sinus, and painful oedema remaining after the more acute symptoms have subsided; acknowledging his indebtedness to a paper by Mr. Spencer Wells, published some years since, for the idea of so using galvanism. Whether galvanism stimulated the blood-vessels directly, or, by promoting the activity of the absorbents and the removal of the exudation products, permitted the capillary circulation, relieved of the *débris* by which it was clogged, to resume its normal condition, no hypothesis was hazarded. Of the great value of galvanism as a therapeutic agent the author has had abundant proof.

ART. 163.—*On the treatment of Perineal Laceration by the application of Sponges impregnated with a solution of Chloride of Lime.*
By M. HERVIEUX.

(*Journ. de Méd. et de Chir. Prat.*, Sept., 1861.)

For some time past M. Hervieux has adopted this mode of treating this very distressing accident with the most satisfactory results. The solution used consists of one part chloride of lime and a proportion of water, varying between ten and fifteen parts, according to the gravity of the injury and the local susceptibility of the diseased parts. The sponge, soaked in this solution and inserted into the wound, remains in its place without the necessity of any accessory support, and at once absorbs and disinfects the morbid fluids, and, as a general rule, the wound becomes healthy and granulates freely. Two cases are related in illustration.

CASE 1.—A consumptive woman, suffering from rupture of the perinæum, aggravated by the presence of syphilitic ulcers of the vulva and anus, and by incontinence of the feces and puriform cystitis. At the inferior angle of the vulva was situated a laceration which had become the fetid receptacle of puriform discharges from the uterus and vagina, and the contents of the intestine escaping through a rent of the sphincter muscle. The perineal rupture extended to about fifteen lines from the posterior wall of the vagina. M. Hervieux prescribed bichloride of mercury internally and in baths, and the permanent application of a sponge impregnated with a solution containing one sixth part of chloride of lime. This sponge the patient herself applied five or six times a day, without any bandage. Within twenty-four hours the offensive effluvia preceeding from the parts had disappeared, and the wound had assumed a healthy aspect. At the end of a fortnight the dimensions of the laceration decreased, and three days later they had become reduced to one half. On the twenty-fifth day the sore, in its widest extent, measured about seven lines, and the perinæum had closed again. In a month the passage of feces had ceased to be involuntary, incontinence of urine was also removed; and in five weeks a complete cure was brought about.

CASE 2.—In this case the same satisfactory results were attained even more rapidly. The injury it is true, was less extensive, but the patient was also consumptive and affected with syphilis, and had, moreover, suffered during the first two weeks from a serious typhoid attack.

ART. 164.—*On Urethritis as it occurs in Females.* By M. GUÉRIN.

(*Lancet*, July 20, 1861.)

In a recent clinical lecture at the Female Venereal Hospital at Paris, the Lourcine, after a minute description of the anatomy, regional and structural, of the parts concerned, M. Guérin said—“Simple inflammation may occur in the female, as it does in the male, from the introduction of foreign bodies into the canal. The contact of the sound or the catheter is, in both alike, capable of producing mucous hypersecretion or even suppuration; but urethritis from this class of causes in the female subject is very seldom noticed. Certain male subjects are met with who, for the gratification of a depraved

propensity, habitually introduce such foreign substances into the urinary passage, and so provoke inflammation and discharge; when the same propensity, however, exists in the woman, the vagina, and not the urethra, is invariably made use of as the receptacle for the foreign body or bodies employed. By far the greater proportion of cases of urethral blennorrhagia in the female arise from gonorrhœal contagion." Differing from the majority of authors (MM. Cullerier and Robert, for example) who have treated this question, M. Guérin believes the existence of urethritis in the female to be a common accompaniment of vaginal gonorrhœa. The readiness with which fluids once poured out or secreted in the vagina can penetrate the orifice of the meatus urinarius is easily seen in fluor albus, and the process and spread of contagion when the discharge is copious is usually very rapid.

M. Guérin is of opinion that the symptoms very generally attributed to urethritis in the female—namely, those of itching, pricking, or burning, are hardly ever, if at all, present, being deductions by analogy and inference, and not drawn from clinical observation. In the male the canal is long, sensitive, and complicated in its relations; in the female, on the contrary, it is short and simple. "To the difficulty of diagnosing this malady may be attributed the common belief in its rare occurrence. Occasionally, it is true, the orifice of the meatus is inflamed, swollen, dotted with red points or pimples corresponding to the openings of the lacunæ, and in such cases recognition of urethritis is easy; but when the disease is internal, and when no pus or muco-purulent discharge appears externally, detection becomes more difficult, and the complication may be overlooked. When any doubt exists, the patient should be prevented from emptying the bladder for several hours; the finger should then be introduced into the vagina, and drawn along the anterior walls so as to press out any purulent deposit collected within the canal—an infallible method for the recognition of the malady if it exist." This latter proceeding should invariably be adopted by the surgeon before he ventures, in a case of gonorrhœa, after the vaginal discharge has disappeared, to give a clean bill of health to a prostitute. The neglect of such a precaution has on several occasions, within M. Guérin's own experience, led to a fresh propagation of disease; and in those cities where the prostitutes are regularly examined, this method of examination should be comprehended in the regular routine investigation. "Discharge from the urethra may occur in consequence of the penetration of the leucorrhœal discharge into the meatus; but this is seldom likely to prove a cause of error, as a simple cleansing of the parts suffices to remove the mucus, which is not reproduced, as in urethritis, at the end of an hour or two, leucorrhœa never affecting the mucous membrane of the meatus; or the purulent liquid may be furnished by a chancre within the canal, and if any induration be felt with the finger, the inoculation test should be resorted to, which will dispel the doubt; or lastly, the existence of cancer of the uterus, implicating likewise the anterior wall of the vagina, may occasion a pouring out of pus from the mucous lining of the meatus; but here again the nature of the discharge and a deeper exploration towards the

uterus will set the matter at rest, and decide the question of diagnosis. The pain, burning, itching, or pricking, stated by most authors as characteristic of urethritis, occurs very frequently in women on the subsidence of the monthly period." This affection, which M. Guérin is disposed to term urethral neuralgia, is unaccompanied either by redness of the mucous surface or by any hypersecretion. "Unlike 'ocular neuralgia,' in which there is profuse discharge of tears, the similar affection of the meatus urinarius in the female is characterised by no discharge whatever, a varying degree of hyperæsthesia being the only accompanying symptom. Like sensations may be caused by polypus of the urethra or by fissure of the anus, and in cases of the latter so completely sometimes does the sympathetic pain centre in meatus, that the surgeon is liable to be put off his guard, and to overlook the real seat of the disorder." In summing up, by way of conclusion, his experience relative to urethritis, M. Guérin stated, as a general rule, that when this condition is found to exist in connexion with vaginitis, the case may be safely diagnosed as one of a contagious nature.

ART. 165.—*On the diagnosis and treatment of Intra-uterine Polypus.*
By Dr. GREENHALGH, Obstetrical Physician to St. Bartholomew's Hospital.

(*Medical Times and Gazette*, Oct. 12, 1861.)

Few additions have been made to our knowledge in the diagnosis and treatment of polypus of the uterus since the publication of Dr. Gooch's valuable treatise on that subject, except as regards the minute anatomical structure of these growths; but it is now generally admitted, contrary to the opinion of that eminent authority, that the removal by the knife is far preferable to that by the ligature, which is not only more tedious, but renders the patient liable to the dangers of purulent infection. "There is yet another method," says Dr. Greenhalgh, "which appears to possess all the advantages without any of those drawbacks usually attributed by authors to the foregoing operations; I allude to the use of the *écraseur*, which upon further trial will, I think, be found eventually to supersede all other procedures. Dr. Fergusson, in his excellent commentary on Gooch's Essay, when alluding to this appliance, states, "that judging from the mechanism of the instrument, it must be applicable only in the cases where the stalk is easily reached." That such a fear cannot reasonably be entertained is clearly demonstrable from the following case, in which not only was a polypus of the fundus uteri safely removed by that instrument, but it was found more manageable than the ligature or polypome, to both of which a fair trial had previously been given.

CASE.—On the 19th of last July, I was requested by Dr. Wildbore to see Mrs. W—, æt. 35, married, of fair complexion, and dark hair and eyes, who presented a very bloodless aspect. She stated that at the age of fifteen years she commenced to menstruate regularly, painlessly, and somewhat

profusely; the discharge was bright in appearance, never coagulated, and usually lasted from eight to ten days, with an interval of three weeks. When about sixteen years old, she became for the first and only time pregnant, during which condition she was frequently threatened with miscarriage, having had repeated attacks of hæmorrhage, for which she was freely bled without any good result. At the completion of the seventh month she gave birth to a stillborn child, followed by a very moderate loss of blood. Her nose would frequently bleed on the slightest cause. She enjoyed excellent health up to the age of twenty-nine, when she began to suffer from almost constant discharges of bright and frequently coagulated blood, which sometimes became alarmingly profuse, and rarely left her for more than three or four days at a time.

Although she experienced no actual pain, weight, or bearing down, still she was frequently annoyed by a sense of discomfort about the loins and lower part of the back, which was much increased by any excitement. These symptoms becoming aggravated and greatly interfering with her strength, she was induced, about five and a half years ago, to consult an eminent accoucheur, who, after a careful vaginal examination could detect no disease of the womb, and ordered the usual remedies for the arrest of hæmorrhage; but experiencing little and only temporary relief, she sought the advice of some of the most celebrated accoucheurs in this country and abroad, but without deriving any permanent benefit.

Latterly, she had given up all treatment, under the impression that the disease, whatever it might be, was incurable; until recommended by Dr. Wildbore to place herself under my care. On making an attentive vaginal examination, I found that canal extremely small, the os and cervix uteri high up and tilted upwards and backwards, the body being considerably anteverted. There was no undue heat, dryness, throbbing, or tenderness of the parts. The sound, which was introduced with difficulty, and only after being much curved, passed upwards and forwards to the extent of five inches and a half, clearly showing that the uterus measured internally three inches more than the normal size. I at once suspected that there was an intra-uterine polypus, and ventured to express an opinion to that effect. I advised that sponge-tents should be introduced into the os and cervix uteri, so as to enable me the better to explore the interior of that viscus. On the 25th of July the first was introduced, and on the 28th, after the removal of the third, which had fully dilated the os and cervix uteri, I was enabled to detect a polypus attached to the fundus, around the pedicle of which I succeeded, after much difficulty, in passing, by the aid of Gooch's canula, a ligature, which unfortunately broke during the process of tightening. Having been foiled in this attempt, the parts being somewhat tender, and there being no urgent symptoms, I determined to delay any further manual interference for a few days, and ordered repeated doses of infused ergot of rye, with the hope that the polypus would descend within easy reach; such, however, was not the case. I therefore decided, with the concurrence and valuable assistance of Dr. Wildbore, to make another attempt to remove the growth.

On the 10th of August, after the withdrawal of a second sponge-tent, I could pass my finger freely into the uterus, when I traced the pedicle of the polypus, which was broad, and firmly attached to the fundus. Having secured the growth as high up as possible with a hook, gentle traction was made by my friend, while I directed the chain of the *écraseur* anteriorly, the convexity of the instrument passing posteriorly into the uterus. The chain being gradually and carefully tightened without causing any pain, I proceeded slowly to strangulate the growth, which came away without the slightest

hæmorrhage or pain in a quarter of an hour after the adjustment of the instrument. The polypus, of fibrous form, with a broad pedicle, measures two inches and a half in length, and about three quarters of an inch in diameter. With the exception of a slight abrasion about the os uteri, which has been cured by the application of nitrate of silver, this patient has recovered rapidly and without one unfavorable symptom.

The interior of the uterus measures at present (August 23rd) about one and a half inch more than the normal standard.

ART. 166.—*The Pathogeny of Retro-uterine Hæmatocele.*
By Dr. BRAUN, of Vienna.

(*Wiener Med. Wochenschr.*, Aug. 31, 1861; and *British Med. Journal*, Oct. 12, 1861.)

Professor Braun has reported ten cases of retro-uterine hæmatocele; and the following are some of the conclusions at which he has arrived:—1. In the ten cases, the diagnosis was made with certainty in eight, and with probability in two. Nine of the patients recovered perfectly; in the fatal case, there were extra-uterine pregnancy and obsolete peritonitis. In seven cases, the indications afforded by exploratory puncture were very encouraging. Puncture and entire evacuation of the tumour was followed by cure in six cases; in three, recovery took place under passive treatment. In six cases, the hæmatocele was retro-uterine; in four, antero-uterine. In none of the cases did the extravasation surround the uterus; it was always confined to one half of the pelvis. 2. Rapid cure may follow the emptying of the hæmatocele by puncture; the fertility of the patient is not destroyed; and a subsequent pregnancy and parturition may follow their normal course. 3. Moveable pelvic tumours, which careful palpation and examination show to be probably hæmatocèles, are recovered from under or after inunction of iodine and glycerine. 4. The quantity of blood contained in a uterine hæmatocele may vary from a few drachms to several pounds. 5. The blood extravasated in the neighbourhood of the uterus undergoes a metamorphosis; the corpuscles become broken up, and their membranes appear flabby and eroded; they do not undergo putrefaction, and immediately after evacuation do not bruit a putrid smell. When the hæmatocele is of long standing, dark-brown spots are formed on its walls; the blood-corpuscles are absorbed, and a greenish-yellow fluid is left, having the specific gravity of the blood-serum, with an alkaline reaction, and containing albumen, a very large amount of albuminate of soda, a little biliverdin, no ammonia, very little sugar, but the salts of the blood-serum, with a preponderance of the chlorides. The fluid removed by the trocar from a hæmatocele generally contains blood of a tarry, ropy consistence, not of bad odour, with numerous patches of pigment, and with hæmatin; it also contains crystals of ammonio-phosphate of magnesia. 6. During the existence of a hæmatocele, menstruation sometimes runs a normal course, without pain; sometimes it is very profuse and painful, and is generally attended by enlargement of the blood-cyst; sometimes hæmatocele exists coincidently with menorrhagia of several months' duration. Intense

anæmia is generally only observed where the hæmatocele is complicated with menorrhagia; without this, its presence is compatible with the retention of a healthy colour of the face. 7. The growth of a hæmatocele is sometimes slow, sometimes very rapid. It may in a few days attain the size of a man's head; and in this case the symptoms are generally those of an internal hæmorrhage. 8. Some days after the emptying of a hæmatocele, the exudation acquires a penetrating odour, which may be removed by careful injection of the cyst with warm water. 9. Menorrhagia occurring in conjunction with a hæmatocele soon ceases, as soon as the hæmatocele is perfectly emptied. 10. Prolapsus of the vagina may be produced by hæmatocele, with or without the presence of pregnancy. 11. In the highest grade of antero-uterine hæmatocele, the tumour reaches downwards lower than the orifice of the urethra, and upwards as far as the umbilicus. 12. The bladder and uterus are generally pushed upwards by the tumour, more frequently forwards, rarely backwards and to the side. The direction of the displacement may be ascertained by careful catheterization. A hæmatocele projecting into the vagina is not reduced in size when the bladder is emptied by the catheter. 13. Hæmatocele may be induced by extra-uterine pregnancy, when apoplexy of the ovum and extravasation of blood takes place. 14. Secretion of milk appears not to accompany hæmatocele, unless pregnancy be also present. If there be lacteal secretion in a case of hæmatocele, when the uterus is evidently empty, there is probably an extra-uterine pregnancy. 15. Extra-uterine blood-tumours occurring during pregnancy may fill nearly the whole pelvis, and, lying behind the urethra, may produce the same troubles as vaginal cystocoele or hernia of an ovarian cyst into the vagina. 16. Exploratory puncture forms the only absolutely sure means of diagnosis between ovarian tumours and uterine hæmatocele.

ART. 167.—*A new Elastic Pessary.* By Dr. H. HARTSHORNE.

(*American Quarterly Journal of Med. Science*, Oct., 1861.)

At a recent meeting of the Philadelphia College of Physicians, Dr. Hartshorne exhibited several *ring pessaries*, of different sizes, made of vulcanized caoutchouc. The material and form were almost precisely those of the ordinary gum-ring given to infants. Dr. Hartshorne had first made use of the gum-ring as a pessary, and found the only objection to it to be its deficient size. In the cases in which he had so far used them he had found them to answer perfectly well. After remaining *in situ* for many weeks, they had been found to show less evidence of change than many of the gutta-percha rings would have done. The advantage of this kind of supporter is its elasticity, which imitates and substitutes (or affords a supplement to) the natural supporting powers of the utero-vaginal apparatus more benignantly than any inflexible or unyielding material can do. At the same time it is not unreliable, as is the case with the india-rubber air-bag or colpeurynter, and it is free from the annoyance of a protruding tube.

ART. 168.—*Case of Mollities Ossium.* By Dr. MACKENZIE.

(Lancet, Oct. 5, 1861.)

CASE.—Esther L—, æt. 40, was admitted as an out-patient at the Western General Dispensary, under Dr. Mackenzie, November 2nd, 1860. She had been married nineteen years, and had had ten children, all healthy, the youngest now twenty-one months old. She states that her father died of phthisis, and her mother of old age; their other children, five in number, are living and healthy. She menstruated at eighteen years; the catamenia have appeared regularly up to this present time. Had no difficulty with her first labour; but her subsequent labours gradually became more difficult and painful. About four years ago, previous to which time her health was very good, she noticed pains in various joints, particularly in the knees, which seemed as if giving way; this she ascribed to rheumatism. She was then pregnant with her eighth child, and the pains increased daily until after her delivery, when she was relieved; but they at no time entirely left her. She again become pregnant, the pains increasing as before, and, although relieved, they remained much worse after delivery than after her previous labour. She now noticed an alteration taking place, probably due to the spine becoming curved, and remarked that her shoulder was growing out, and that she was becoming shorter. During her last pregnancy (two years ago) the pains had increased much in all her joints. She was quite unable to walk three months before her admission, and lost her strength, so as not to be able to lift the slightest weight. She states that her last child was turned before delivery could be accomplished; and afterwards she felt great pressure on her chest, so that she could hardly breathe. She never stood on her legs after this confinement, and the pains in the bones increased in intensity. She is pale, anæmic, and emaciated; lies on her back with the head raised; cannot lift herself up from the bed, but moves her arms well; lower extremities with difficulty lifted an inch or two from the bed. The bones generally are painful on pressure, especially the thigh-bone. The spine is curved, slightly angularly and laterally. The ribs are somewhat bent, as are the fingers, especially on the right hand, where the first phalanx of the thumb has been pressed back at right angles to the second, probably from pressing her needle in sewing; and the metacarpal bone of the middle finger is bent, probably from the use of the thimble. There is a solid growth on the inner side of the left hand, between the carpus and metacarpus; this was subsequently found to be connected with the bone, and composed of apparently the same material as that which filled the bones. The lower extremities start occasionally, and the reflex movement is slight. No irregularity is observed about the respiratory or circulatory organs. She has very little appetite; the tongue is reddish, without fur, and dry; bowels opened once in three or four days. When first seen, the urine contained a vast quantity of phosphates; but these disappeared, and it became healthy. Various preparations of iron were administered, and good nourishment given to improve the general health of the patient, which was much debilitated from privation. The pains increased, and she became unable to move any part except her arm. She found relief from morphia, and at last took a grain at a time for a dose. The involuntary starting of the lower extremities became more marked, especially on awaking from sleep, and on one of these latter occasions the left thigh-bone gave way just below the trochanter. The limb was found to be shortened and everted, and an attempt to move it occasioned so much agony that it was allowed to remain as it was. The right thigh also became intensely painful; but it was

not found that the bone of that side was also fractured until after death. The bowels became constipated about a month before death, resisting all efforts to get them relieved, and she died February 1st, 1861, seemingly worn out with the pain, which she described as intolerable, and daily increasing.

Post-mortem examination.—The thoracic and abdominal viscera were healthy, the osseous system being apparently alone involved. The ribs were bent, and so soft as to be cut as easily as somewhat hard cartilage. The other bones were all softened, including those of the head and lower jaw, the blade of a scalpel being easily pushed through them. The thigh-bones were most softened, covered with fat, and filled with the semi-fluid brownish material often described as present in this disease. The bones in various places could be easily indented with the finger, and appeared more like thickened skin than bone. About six inches of the thigh-bone, where fractured, weighed fourteen drachms.

(C) CONCERNING DISEASES OF CHILDREN.

ART. 169.—*Cases illustrative of the Independent Liability of the Fœtus to Disease.* By MR. LOUIS R. COOKE, Accoucheur to the Royal Pimlico Dispensary.

(*Medical Times and Gazette*, Oct. 19, 1861.)

The subject of the independent liability of the fœtus in utero to epidemic and visceral diseases is still involved in so much obscurity, and so many conflicting theories and so much contradictory evidence have been brought forward in relation to it, and to the data upon which all mere argument on the subject must be based, viz., the anatomical relations of the maternal and fœtal circulations, and the mode of nutrition of the fœtus, &c., that it seems we are more likely to arrive finally at distinct conclusions on the matter by the collection of facts, than by any amount of induction founded upon the researches of speculative pathology.

The following cases (especially the latter) appear to offer affirmatory evidence on the subject :

CASE 1.—Mrs. G—, a young woman, vaccinated in early life, called me in to attend her during parturition, she being at the time in perfect health, in all respects separable from the parturient condition. She was delivered, after a common-place labour, of a full-grown live male child, covered with the eruption of variola in the fully matured pustular stage of the disease in its discreet form ; on the second day, however, the disease became universally confluent, and the infant ultimately died with convulsive symptoms. During the first four days following its birth, the health of the mother continued to warrant the hope that she was about to escape—a hope which I based upon the fact of her previous vaccination ; this, however, turned out not to be the case, as on the fifth morning papulæ became apparent, and she eventually went through, and recovered from, a pretty severe attack of the disease.

This case offers no points of difference from those related by Jenner, Mead, and Mauriceau as having happened in his own person, of a nature to constitute additional evidence on the subject ; still, the author thinks, it may be fairly asked, bearing in mind the long apparent precedence of the disease in the child, whether it does not excuse the dictum of the author who affirmed that

disease of the ovum is more injurious to the mother than is maternal disease to the ovum.

CASE 2, which came under my observation very lately, is, however, much more to the purpose, and indeed is as conclusive as any single case can well be.

A poor woman, the wife of an artisan, but living under unusually favorable conditions as to light, ventilation, and cleanliness, and from whom subsequent inquiries elicited that she had never been subject to any form of skin disease, applied to me to attend her during her confinement. The child was born with a beautifully-marked eruption of herpes zoster, extending from the central spinal line across the angle of the right scapula, and round to the anterior mesial line of the ensiform cartilage. This followed the usual course of the disease, lasting about five days, and leaving, therefore, the presumption in my mind that it must have existed for at least an equal time in utero. Subsequent examination of the mother gave no trace of a similar condition in her; neither was it possible to establish any remote connexion between it and external causes, by discovering an herpetic eruption on the genitals of either of the parents. Nor was it possible to attribute the appearance to the pemphigoid eruption of the French authors, the result of the syphilitic cachexia, as the history and general appearance of parents and child were opposed to the supposition, and the form and grouping of the vesicles, the uniform width of the band of eruption, its seat, the healthy condition of all other portions of the skin, and the spontaneous decline of the disease, were sufficient evidences of its nature.

ART. 170.—*On the employment of Pepsine in the Inanition of New-born Children.* By M. JOULIN.

(*Moniteur des Sciences*; and *Journ. de Méd. et Chir. Pratiq.*, Aug., 1861.

"I have on several occasions," says M. Joulin, "lost in a few days, infants from *congenital weakness*. Death could not be traced to disease of any one viscus, the entire system seemed to suffer; the children perished more or less rapidly, respiration became in some degree impeded, but nutrition seemed especially to be interfered with, a circumstance which particularly attracted my notice, because, although noted by other observers, its importance does not seem to have been duly estimated. Twice the symptoms were well marked: the respiratory function, if not vigorously, was at least regularly and completely accomplished, the voice was sonorous and the screams enduring. But the insufficient nutrition did not supply the system with materials adequate to the support of life."

In one of the cases alluded to, M. Joulin was enabled to assist nature by exhibiting artificial nutriment until further extraneous aid ceased to be necessary. In this respect, the case in question appears deserving of record, for it is doubtless the first instance in which a new-born infant in the last stage of marasmus has been saved by pepsine.

The child was four days old, excessively emaciated, small, wrinkled, and presenting almost the appearance of decrepitude. Its total weight was 1250 grammes (about three pounds and a half, Troy weight). The voice was weak but distinct, and respiration not obstructed. The mother was an excellent nurse, but although the infant took the breast readily,

he constantly threw up the milk after each meal, and the little that was retained in the stomach passed rapidly through the bowels and was found in the liquid motions, unchanged, except by a slight admixture of bile. M. Joulin therefore conceived that hunger might be the cause of the child's incessant screams, and in order to subdue the diarrhœa and obstinate vomiting, resorted without benefit to syrup of poppy, blistering of the epigastric region, and other remedies which in the case of an acquired disease would probably have proved serviceable, but were necessarily powerless for the relief of insufficient nutrition consequent on imperfect organic development. Emaciation therefore increased, drowsiness set in, the voice became fainter and the screams less frequent; the child, in short, was dying, when it occurred to M. Joulin to exhibit pepsine.

"I ordered," he says, "fifteen grains of Wasmanoz's pepsine to be divided into ten powders, which I conceived would be more easily swallowed than lozenges. On the 8th of May, 1859, a grain and a half of pepsine was mixed with a few drops of sugar and water, and introduced with a little of the mother's milk into the mouth of the child, who had now scarcely strength enough left to take the breast. Up to the 11th no improvement was perceptible, and I began to fear that the remedy had been given too late; I did not however despair, life still persisted, and the condition of the child might be considered at least as stationary. On the 11th, the diarrhœa decreased in a marked manner, the voice was stronger and suction more vigorous. On the 20th digestion was accomplished in a perfectly satisfactory way, and the vomiting and diarrhœa entirely ceased. The remedy was however persevered in up to the 30th of June, when it was finally discontinued. Subsequently, the child cut his teeth without trouble, and at thirteen months was able to walk; he is now two years old, and a fine, vigorous little fellow."

In this case, the return to life coincided in so distinct a manner with the exhibition of pepsine, that there is every reason to refer the cure to the remedial agent last resorted to. M. Joulin himself entertains no doubt whatever on the subject, and invites his readers to have recourse to pepsine in all cases of congenital weakness coupled with incomplete development of the digestive organs, and even in the more complex cases in which the respiratory system is likewise involved. This treatment might perhaps succeed in conquering one of the complications which threaten life, and in some instances, give nature time to remove the other.

ART. 171.—*Desquamation of the Cuticle in a living new-born Child.*
By Dr. READ.

(*Boston Med. and Surg. Journal*, Sept. 12, 1861.)

At a Boston society for medical improvement, Dr. Read said that he had attended a woman who was prematurely confined in consequence of having fallen down stairs. The hands and feet of the child were denuded of cuticle, which hung from them in shreds. The child was apparently at the eighth month, and lived twenty-four hours. There was no other

sign of disease. The case shows that desquamation of the cuticle is not always a sign that the fœtus has been dead a considerable length of time.

ART. 172.—*On the Influence of Abnormal Parturition, difficult Labour, Premature Birth, and Asphyxia Neonatorum on the mental and physical condition of the Child, especially in relation to Deformities.* By Dr. LITTLE, Senior Physician to the London Hospital.

(Lancet, Oct. 19, 1861.)

Pathology has gradually taught that the fœtus in utero is subject to diseases similar to those which affect the economy at later periods of existence, and that this is particularly true as regards deformities. Thus we have congenital and non-congenital club-foot, rickets, degeneration of muscles, and amputations in utero. But there is another epoch of existence, namely, the period of birth, during which the fœtus is subjected apparently to conditions differing from those of either its earlier or later existence; and the object of the present paper is to show that the act of birth does occasionally imprint upon the nervous and muscular systems of the nascent organism very serious and peculiar evils.

Nearly twenty years ago the author endeavoured to show that premature birth, difficult labours, mechanical injuries during parturition to head and neck where life had been saved, and convulsions following the act of birth, were apt to be succeeded by a determinate affection of the limbs of the child, which he then designated "spastic rigidity from asphyxia neonatorum."

The state of things in the fœtus at the moment of birth—at the moment of entire withdrawal of placental or maternal circulatory influence—is one of imminent failure in decarbonization of the blood. If pulmonary respiration be not immediately established, the state of suspended animation, asphyxia neonatorum, takes place. This, the author infers, is followed by stagnation of blood in all the large venous channels, and inevitable congestion of the capillary systems of the brain and spinal cord; and, if this state be not relieved by respiration, death ensues. The latest writers on the morbid anatomy of still-born children prove beyond a doubt, by their dissections, that punctiform ecchymoses are present, as a rule, on the serous surfaces of the chest and abdomen, besides intense congestion of all the viscera, blood extravasations between the pericranium and cranium and on the dura mater, capillary apoplexy, and engorgement of the vessels and sinuses of the brain with blood, in children born dead, whether from interruption of placental or insufficient pulmonary respiration, caused by pressure on the umbilical cord, premature separation of the placenta and uterine hæmorrhage; also similar ecchymoses on the lungs and heart of prematurely-born children who had lived some time.

Through these dissections the author is convinced that mechanical injury to the fœtus is not necessary for the production of the above morbid states. Dr. Little attributes to the interruption in placental circulation and non-substitution of the pulmonary circulation the internal congestions, capillary extravasations, and serous effusions which corresponded

with or produced the symptoms of asphyxia, suspended animation, apoplexy, torpidly tetanic spasms, convulsions of new-born children, and the spastic rigidity, paralysis, and idiocy subsequently witnessed. His opinion is that asphyxia neonatorum through injury to nervous centres is the cause of the contractions which originate at birth—more or less general spastic rigidity, and sometimes of paralytic contraction.

The former class of affections he describes as impairment of volition, with tonic rigidity, and ultimately structural shortening in any degree of few or many muscles of the body, varying in effect from the slightest impairment to complete imbecility of mind and body.

One fact is common to all the forty-seven cases of persistent spastic rigidity appended to his paper—namely, that some abnormal circumstance attended the act of parturition, or rather the several processes concerned in separating the fetus from the parent. There were few if any cases of general spastic rigidity referable unequivocally to any illness subsequent to the establishment of proper pulmonary respiration, though spastic contraction of a single set of muscles after infantile convulsions and other illness was an every-day occurrence. Asphyxia neonatorum is very apt to be accompanied and followed by convulsions, as convulsions at or subsequent to birth were only a symptom of lesion of nervous centres, though they might doubtless react on those centres, and thus probably aggravate the disorder. The author has post-mortem particulars of only one of the cases of spastic rigidity he had referred to asphyxia at birth, but he believes that, if examined post mortem, after living many years an anatomical condition very different from that present at or soon after birth would be found, and that, although the effused blood might be absorbed, atrophy of the brain, or possibly chronic meningitis with effusion, chronic meningeal hyperæmia, or myelitis would result. This was confirmed by the single case examined after death.

Cases of deformity of cranium, and some frequently described as congenital idiocy, are attributed to severe lesions caused by mechanical compression and extensive hæmorrhages within the cranium; and in addition to the undoubted instances in which cranial injury and some imperfect development of intellect stood in the relation of cause and effect, cases are given which show impaired intellect in some in which no mechanical injury had taken place, but in which suspended animation, asphyxia neonatorum, and probably its consequent general and capillary congestion and ecchymosis, capillary apoplexy of the brain as well as of the spinal cord, and perhaps a moderate amount of larger apoplectic extravasation, had taken place, and had been imperfectly recovered from.

Affections of the functions of organic life, protracted inability to suck and swallow naturally during the first few weeks of life, the liability to what was classed under the name laryngismus stridulus, are referred to injury at the base of brain and medulla oblongata, such as capillary apoplexy consequent on suspended animation, without previous violence to head and neck. The author mentions cases of death shortly after birth from convulsions and trismus nascentium, recorded by Joerg, Marion Sims, Evory Kennedy, and Doherty, who seemed unaware that some of these cases escape death and become affected with general spastic rigidity. He considers himself justified in referring spastic rigidity following asphyxia at birth to lesion of the spinal cord, as that was the only nervous

centre which invariably presented symptoms of lesion in all the numerous cases of injury from abnormal parturition, independent of mechanical injury, appended to his paper. As additional evidence of the dependence of the several states of the nervous centres upon asphyxia after abnormal labour, the author mentions the fact that recovery from asphyxia from choke-damp and suspension is apt to be followed by cerebro-spinal disease, and that he had found extravasations at autopsies after the asphyxia of Asiatic cholera. Cases of wry-neck and paralysis due to injury at birth are also related.

The paper is illustrated by photographs and a copious appendix of cases.

ART. 173.—*A peculiar form of obstinate Vomiting in Children.*

By Dr. LOMBARD, of Geneva.

(Gaz. Méd. de Paris, May 18, 1861.)

In this paper, which was read before the Medical Society of Geneva, Dr. Lombard says that he has met, in the course of thirty-one years' practice, with seven or eight cases of a singular gastric disorder in children aged from five to twelve years. The characteristic symptom of the disease is incessant vomiting, coming on without evident cause, in apparently the best health, and repeated every quarter or half hour. The vomited matter is purely watery, with some glairy filaments; it contains no bile, blood, nor food. The quantity diminishes from the commencement of the attack; and when the vomiting continues several hours, mucus alone is at last expelled after much effort. The attacks of vomiting are accompanied and followed by intense thirst, retraction of the abdomen, considerable feverishness, and obstinate constipation. Their duration rarely exceeds forty-eight hours; they generally end in eighteen or twenty-four hours. The vomiting is generally accompanied by paleness, loss of flesh, and an appearance similar to that which is observed in cholera. The disorder has generally appeared between the sixth and seventh years of age; it seems to diminish in intensity as time advances, and rarely lasts beyond the twelfth or fourteenth year. There is a remarkable tendency in the disease to repetition; all Dr. Lombard's patients had attacks at intervals of a few weeks during several years; and in one, in whom the paroxysms were always very severe, they lasted until his eighteenth year, when, although he had been for some time free from the disorder, he was seized with incessant vomiting at the commencement and during the first stage of measles. The effect produced on nutrition is remarkable. Most of the patients remained thin, pale, and weak for a number of years; in two girls, who were under Dr. Lombard's observation many years, anemia was so intense that there was anasarca, not only of the limbs but also of the trunk and face; and yet there was neither diarrhœa, albuminuria, nor cough; nor could the most careful examination detect any organic lesion. One case only proved fatal, in a child aged seven or eight years. At the post-mortem examination, the mucous membrane of the stomach was found to be perfectly healthy, without redness, softening, ulceration, or erosion; the intestine, peritoneum, and mesenteric glands were also healthy, as were

also the other abdominal organs. In the treatment, Dr. Lombard has tried opiates, bismuth, nux vomica, iced milk or water, ice in pieces, and sinapisms or opiate poultices to the abdomen; but nothing has succeeded so well as total abstinence from drink or medicine. Resisting the entreaties of the patient for drink, he allows nothing to be introduced into the stomach. When the violence of the attack is somewhat assuaged, a teaspoonful of iced water may be given at long intervals, the quantity being increased to a tablespoonful; and when there has been no vomiting for eight or twelve hours, cold chicken-broth or milk may be given by spoonfuls. Great care is required in managing the administration of food; as relapses are likely to occur when it is given too rapidly or in too substantial a form. Enemata are generally required during convalescence; and, if these fail, some mild evacuant, such as castor oil or manna, should be given. With regard to the pathology of the affection, Dr. Lombard says that it is evidently not a gastric inflammation; for such a condition would not disappear so completely in the intervals between the attacks as to allow the patient to regain a certain amount of strength and *embonpoint*; besides which, the total absence of inflammatory lesion in the necropsy of the fatal case contradicts the idea of inflammation. It is not the chronic catarrh of the stomach of MM. Rilliet and Barthéz; the milder form of which is characterised by alternations of constipation and diarrhœa; and the more severe by a permanent intolerance of food; nor can the vomitings be considered as purely spasmodic, or the result of a gastric neuralgia.

ART. 174.—*On Dentition.* By Dr. JACOBI, of New York.

(*American Med. Times*; and *British Med. Journal*, June 15, 1861.)

The younger Pliny states that the renowned Marcus Curius, consul of the Roman republic two hundred and seventy years before our era, had a full set of teeth at birth. This was the reason of his being named Dentatus. The same author mentions the case of Papyrius, and of a lady, named Valeria, who had all their teeth at birth. Zoroaster, the Persian legislator, is also reported to have had all his teeth at birth. The old historians, from whom Weinrich took the facts, probably thought he was destined to become the exponent of wisdom and morals, from being so extraordinarily and precociously gifted. Louis XIV of France, whom some writers call the great, because he lived contemporaneously with some great men of his country, was born with two teeth; as was also his Secretary of State, Cardinal Mazarin. The celebrated Grotius, who then lived in France, prophesied that the royal baby would prove a dangerous character, and that like the nipples of his wet-nurses, bleeding and torn by the voracious infant, the neighbouring sovereigns would be the subjects of the depredations and robberies of the future king. Scottus, in his '*Physiologia Curiosa*,' relates, from a report of Niremberg's, the case of a Spanish dwarf, who had all his teeth when born, and never lost one of them, got a beard in his seventh, and had a son in his tenth year. Old Heister repeats the report of Kauliz, of a child born with two incisors, which soon turned black; the child grew thin and emaciated, and died with rachitis when a year old. In Büchner's collections there

is the case of an infant, twelve days old, who had teeth, and died soon after of a papulous and vesicular eruption, with consecutive desquamation (hereditary syphilis?). Lanzoni reports the case of a new-born infant with two rows of teeth.

We learn from Schurig, that Crausius observed two incisors in the lower jaw of a fœtus in the sixth month of utero-gestation. Schenk reports a similar case. It is stated in '*Vita Peirescii*' that a woman gave birth to a child with long hair and teeth. Thomas Bartholinus is of the opinion that such congenital teeth are the cause of the *vagitus uterinus*. Gùldenkiel reports the case of the daughter of Navinius, an officer at Camenz, who was born with two incisors. Helwich has several cases of boys born with teeth in the lower jaw; and Daniel Ludovicius relates the cases of new-born girls, having teeth in either jaw, and injuring their tongues by them. Similar cases have been reported by Johann Rhodius, Gœckel, Mazarinus, Simon Majolus, Alexander Benedictus, Hildanus, Balduinus, and Polydorus Virgilius.

Gensel reports the case of a boy who was born with two incisors. Shlenek, E. von Siebold, J. Ph. Horn, Mercklin, and Storck, have seen the like, without, however, mentioning the sex of the children. Vesti relates the case of his own daughter, who was born with a tooth. De-tharding observed a tooth in the fœtus of six months; another in an infant three days old; and four teeth in a new-born infant. J. F. Lobstein gives the case of a child born twenty days after the ninth month of utero-gestation, with six incisors. Reveillé-Parise met with four canine teeth in an infant of four weeks, two of which had cut before birth; the development of the other teeth was equally precocious. Meissner saw two incisors in a new-born child, one of which fell out in the course of a few days; in another case the same thing happened, but a second tooth followed soon after, both of which were firmly imbedded in their alveoli and proved to be of the same nature as temporary teeth generally. Two incisors, observed in a new-born infant in the Paris Foundling Hospital, by Billard, fell out after six weeks. Mende observed two upper incisors in an infant; they were loose and moveable, produced pain when touched; the mouth had an oblique direction, and the margins of the maxillæ were connected with each other. Although the teeth were extracted, the infant was unable to suck, and died of trismus on the fourth day after birth. Canton reports the case of a child, in the practice of Mr. Tomes, which was born with two teeth in the lower jaw, by which the breast of the mother had been injured. A similar case occurred in Canton's own practice. Brown mentions the case of a child born with the central incisors through the gums. They were extracted. Two other children were afterwards born of the same mother, in each of whom the same anomaly was found. All the children were females. The teeth were allowed to remain. Crump and Lethbridge have each observed a case of complete dentition at birth; the case of the former observer occurring in a still-born negro child. The sockets were very imperfectly formed. Baumès, while quoting the cases of congenital teeth observed by Columbus, Van Swieten, Marcellus Donatus, and Antigonus, reports the case of a French lady who bore a girl with two congenital incisors in the upper jaw, followed by two teeth on each side of the former, in the same jaw, three days afterwards. The infant died in convulsions.

Richard III, and Mirabeau, the hero of the commencement of the great French revolution, had teeth when they were born. Similar cases are reported by Churchill, Fleming, Denman, while the celebrated Haller collected nineteen. Mr. Whitehead, also, the worthy professor and clinical teacher at Manchester, England, removed two teeth from the lower jaw of a newly born infant, in order to facilitate suckling. They were reproduced at the time when the canine teeth were formed, viz., after a year and a half, instead of the usual time of seven or eight months.

In Billard's opinion congenital teeth are not firm, but are liable to get loose, and be lost; but such is not the experience of Meissner and others. The last author is, as a rule, opposed to the advice of Billard, and the practice of Whitehead, of extracting such premature teeth when they prevent suckling. Meissner's opinion is, that no animal is prevented from sucking by the teeth in its mouth—a theory which is good enough for animals, but not for our race. Whitehead's case, in which it was necessary to remove a tooth to enable the mother to nurse the child, the fact that the nipples are very liable to become sore where the teeth are fully developed before weaning, and finally the few cases reported above, in which congenital teeth did not fall out to give place to the real temporary teeth, are valid proofs against such practice, at least in a number of cases.

Congenital teeth have been made the subject of special remarks by Dr. Nessel, professor of dental surgery at the University of Prague. He removed congenital teeth in three cases. In his opinion they are, properly speaking, not genuine teeth, as they differ greatly in substance and form, and especially in the nature and consistency of their exterior layer. They are less firm and solid, and their enamel is white, but thin, and not formed at all in some parts. They are not inclosed in the dental alveolus, but have a loose attachment merely to the gums. The real teeth will appear afterwards; and his impression is, that such precocious formations are principally observed in individuals who will show the symptoms of general scrofula in more advanced life. He therein coincides with *Capuron's* opinion, who always considers the premature appearance of teeth as a symptom of a morbid constitution. He removed them, not because of any inconvenience to the mother in nursing the infant, but because, in sucking, the tongue is brought forwards, and is liable to become sore and ulcerated from the continued contact. Some of Nessel's remarks correspond with Lassaignac's statements, who, by careful chemical investigations, found the teeth of younger animals to contain more organic matter than the older, as in the case of their bones; but he is certainly mistaken in regard to those congenital teeth which prove to be real temporary teeth.

Sometimes the teeth appear at a later period than the normal ones. Van Swieten gives the case of a girl whose osseous system was well developed, and health perfect, but who had no teeth before the nineteenth month. Rayger relates the case of a girl who got her four temporary canine teeth when thirteen years old; Fauchard, that of a child from five to six years who had a few incisors only. Brouzet knew a child twelve years old who had but one half of the normal contingent set of teeth, the alveolar margin having the firmness and solidity of the gums of old age. Dagès has seen the first tooth appear in the eleventh, and Smellie

in the twenty-first or twenty-second year. Lanzoni knew a child who had the first tooth, and the power of speaking intelligibly, in the seventh year. Ashburner reports the case of a very delicate though lively child, with large head, tumid abdomen, and peculiarly small-sized extremities, who cut the first tooth, an upper incisor, at twenty-two months, and remarks that many cases of tardy access of speech, and of stammering, are connected with erroneous development of the teeth. Schœpf Merel, who relates the case of a child who had the first tooth at three months, and eleven at eleven months, has seen a child who had no teeth when several years of age. Maury attended a girl of seven years, who had not her first lower incisors, the space being sufficient for three teeth, and the alveolar processes being low and narrow. Dr. Jacobi has had under observation a boy to the age of two years and ten months, at which time he had not a tooth, nor a symptom of approaching dentition. The records of the Children's Department of the German Dispensary of the City of New York contain a similar instance in a child of two years of age. Amongst the four hundred observations on dentition reported by Eichmann, there were a few in which the first tooth cut at twenty-two months, and in a case described by Churchill, the first tooth cut at seven years of age.

ART. 175.—*On Tuberculosis in Children.* By Dr. JENNER, Physician Extraordinary to the Queen, and to the Hospital for Sick Children, &c.

(*Medical Times and Gazette*, July 6, 1861.)

The following excellent remarks are from a clinical lecture delivered at the Hospital for Sick Children. They require no comment except this—that when Dr. Jenner speaks of a child as the subject of tuberculosis, he means that it is from some general state of all its parts disposed to the deposit of tubercles, or, in other words, to tubercularization.

"In the adult," says Dr. Jenner, "and yet more so in the aged, occupation, exposure, mental wear, the passions, and accidental diseases, have so modified the general aspect of the man, that although much may still be learned by the practised eye, without a question to the patient, still we are often far from correct in our surmises. It is very different with the child; in reference to its diseases the eye is the great inlet of knowledge. It is so in regard of tuberculosis. The ear and the touch, the test-tube and the microscope, give us no aid in the diagnosis. We judge almost solely from inspection of the patient.

"It is when tuberculosis is inherited from the parents that its characteristic features are the most strongly marked. The germ anterior to the formation of the blood, and even before it has divided into parts, is the subject of tuberculosis, and, as a consequence, the parts formed from and by that germ partake of its constitution; and we see the result, not in this or in that part, not in the blood or bones only, but in every fibre and every cell of the frame, at least in every part made up of such cells. Let me sketch for you the appearance of a child who is the subject of well-marked tuberculosis—one concerning whose predisposition to become consumptive we should have no doubt. I did so briefly in

the lectures I gave here last year, when contrasting the leading features of tuberculosis, scrofulosis, rickets, and syphilis.

"The child's loveliness is often the pride of the parents; they are charmed with its tall and thin figure, its straight and thin limbs, the delicacy and transparency of its skin, the clearness of its complexion, the beauty of its eyes, so bright, with so large pupils, and so long lashes, the oval contour of its face, and the silkiness of its hair; it is so forward, so intelligent, so clever. It lives rapidly, it cuts its teeth early, it talks before others, it quickly runs alone.

"In the mother's and the poet's eye—and every mother is a poet when describing her child—the child is a pretty little fairy; in the physician's eye it is an interesting pathological specimen. If we examine such a child a little more closely, we find that its bones are all small in circumference, long, and singularly firm; that its cartilages are comparatively soft. We press our stethoscope on its sternum, and we are surprised to find how easily it is depressed, *i. e.*, how flexible are the cartilages. The ends of its long bones are very small, and on cutting them through vertically, we are struck by the thinness of the layer of cartilage which, in the state of preparation for ossification, instead of being, as in rickets, greatly increased, it is in tuberculosis diminished. Health is intermediate. This difference is most striking in the ribs, *i. e.*, at the points where the ribs unite with the costo-sternal cartilages: in rickets, a row of nodules; in health, ditto; in tuberculosis, *nil*.

"But there is another important difference between the state of the ribs in the rickety child, the healthy child, and that the subject of tuberculosis—I mean the firmness of the ribs. In rickets, the softness of the ribs modifies all its chest disease in regard of symptoms and danger, and give to the chest that remarkable form with which we are familiar. In tuberculosis, the ribs, in common with all the bones, are even firmer than in health; and the consequence is, that any diminution in the size of the lungs must be followed by a very different alteration in the shape of the thorax from that which occurs in rickets. In rickets, supposing an impediment exists to the entrance of the air, the soft ribs are thrust in by the weight of the atmosphere, and of course recede or are driven in farthest at the part where they are the softest.

"Now we may lay down this law in regard of the diseases of the lung—that all diminution in the size of one or both lungs, if not accompanied by the presence of air or fluid in the pleura, necessitates the falling in of the chest parietes; the walls of the chest follow the receding lung. In tuberculosis the lungs are small; they do not grow with the increasing length of the trunk; they are not only absolutely, but relatively to the height, small; and bear in mind that this want of size in the lungs is anterior to the deposit of tubercle. It is not the upper lobe which is especially affected—every part of the lung seems equally diminished in size; but while diminished in size absolutely and relatively, we often find its air-vesicles dilated, the lung rarified. There is no damage in texture, no loss of elasticity—only a little dilatation of air-vesicles, compensating a little, and but a little, for the smallness of the organs.

"I told you that the chest-walls must follow (no air or fluid being in the pleura) the receding lungs; and that little lungs necessitated a small

thorax. In rickets the softness of the ribs permits of their being driven in by the weight of the atmosphere. In tuberculosis the firmness of the ribs forbids such a change. Nature here uses other methods for diminishing the capacity of the chest.

"We find three forms of thorax in those who are the subjects of tuberculosis, all three consequent on the small lungs of the child. 1. The long, almost circular, thorax. 2. The long thorax with narrow antero-posterior diameter. 3. The long pigeon-breasted thorax. The key to the understanding of the first two is afforded by the thorax of the aged, who are the subjects of atrophous emphysema, or senile atrophy of the lung. As the lung diminishes in size the ribs become more oblique, and as a consequence the four upper intercostal spaces next the sternum are remarkably widened, the four lowest almost obliterated. The sixth, seventh, eighth, and ninth ribs are united at an acute angle with their cartilages—the ribs passing downwards, the cartilages upwards—to be affixed to the sternum or to cartilages above. The result of this alteration in the obliquity of the ribs is that the antero-posterior and the lateral diameters of the thorax are greatly diminished, and the diaphragm, remaining as regards its highest point at its proper level, is necessarily by the lowering of its attached margin considerably more arched than natural; while a certain number of the ribs, in some cases even the eighth, ninth, tenth, eleventh, and twelfth ribs—lie in contact over the greater part of their extent with the diaphragm—have, that is to say, no lung under them. In this way, although the thorax is much lengthened, its capacity is greatly diminished.

"The cause of this form of thorax in the old person whose lungs atrophy is the almost absolute inflexibility of their outer chest walls, the result of their costal cartilages being to a great extent calcified. Then, whenever the cartilage and the ribs in the child, adult, or aged person are particularly firm and the lungs atrophy generally, the thorax obtains the form I have described; we get the long, circular thorax, with narrow but pretty equal antero-posterior, and lateral diameters, oblique ribs, wide upper intercostal space next sternum, and obliterated lowest intercostal spaces.

"Now, if you have followed my line of argument, you will have already understood the cause of the difference between the flat and the circular long thorax. The difference is due to the relative softness of the cartilages in the two. If the cartilages be soft you will have the chest flattened from before backwards, as well as lengthened; and if they be very soft you will have the sternum below the level of the cartilages.*

"The third form, viz., the long thorax with pigeon breast, is the consequence of repeated trilling catarrhs affecting the lower lobes of the lungs of a child whose lungs generally are small. The air during the catarrh being unable to find ready access into the lower lobes of the lungs, the lower ribs are driven inwards at each descent of the diaphragm, bearing the sternum forward. The degree to which the sternum is advanced will depend on the height to which the impediment to the entrance of

* Various functional derangements of the heart, lactic murmurs, &c., result from the caging up of the heart when the antero-posterior diameter of the thorax is thus much shortened.

the air extends in the lungs, or, rather, in the bronchi. The sixth and seventh ribs have, I think, the greatest effect in advancing the sternum. If a child be constitutionally healthy, and suffer repeatedly from bronchitis, we ultimately obtain the same form of thorax; for a certain amount of collapse becomes permanent, and the lower lobes of the lungs are permanently diminished in size.

"How is this last form of thorax to be distinguished from the pigeon-breasted thorax of rickets? In the early stage there is no danger of confounding the two; but when the ribs have consolidated, I have often seen the one mistaken for the other. There is, however, little difficulty in distinguishing the deformity consequent on rickets from that I am now describing. In the pigeon breast from rickets, all the ribs being softened, the deformity extends certainly as high as the second rib. In the pigeon breast from catarrh or bronchitis, the upper part of the thorax is flattened from before backwards; it is only the lower end of the sternum which is thrust forward. The child is pigeon-breasted, but it is only pigeon-breasted at the lower part of its chest.

"We often find, in conjunction with this form of thorax, a knuckling forward of the cartilages just next to the sternum, the yielding cartilage being compressed between the solid rib and sternum.

"I desire, then, fully to impress on you that small lungs are common in the child who is the subject of tuberculosis, and that the form of thorax which in the child indicates small lungs is one of the three I have described.

"By inspection we detect these forms of thorax; the eye, then, is the great inlet of knowledge here as in reference to the general aspect of the child when seeking to determine its disposition to become tubercular. When I come to speak of the physical signs which indicate that the child is tubercularizing or even tubercular, we shall see more fully the importance of the knowledge the eye conveys to us. How often is a child and even a young adult tubercular in the most extensive degree, without our being able to prove by auscultation, percussion, or palpitation, that any organ or tissue is the seat of tubercle? The build of body characteristic of tuberculosis is not, however, always noticeable when the disposition to the deposit of tubercle is considerable, and this is to be expected, seeing that tuberculosis may be acquired after growth is nearly or quite complete. And again, when tuberculosis is inherited from one parent, the transmitted influence of the non-tubercular parent may modify the aspect of the child."

ART. 176.—*On Tuberculization in Children.* By Dr. JENNER, Physician Extraordinary to the Queen; Physician to the Hospital for Sick Children, &c.

(*Medical Times and Gazette*, July 6, 1861.)

"The deposit or formation of tubercle," says Dr. Jenner, in the clinical lecture quoted in the previous article, "may take place slowly or rapidly. Tuberculization may therefore be acute or chronic; but I need scarcely remind you that there is no sharp line of demarcation

between the acute and chronic forms of any given disease. There is no disease that occurs as an acute affection and also as a chronic affection but offers all intermediate terms of duration. Tubercularization in the child is distinguished from tubercularization in the adult by the large number of organs in which the deposit occurs at or about the same time and by the small amount of the deposit at one spot. It is this latter which makes palpation, percussion, and auscultation so often small aids in the diagnosis of tubercle, and which compels us to trust especially to a study of the general symptoms, of the conditions appreciable by the eye, and of the etiology of the disease.

"Symptoms of acute deposit of tubercle.—Children rarely tubercularize acutely without they inherit from one or both parents a disposition to become tubercular, or have recently been the subjects of measles or whooping cough, or have been placed in singularly unfavorable hygienic conditions as regards air and light. With regard to these latter, they are, like errors in diet, more often merely exciting causes of tubercularization in the child already the subject of tuberculosis, than the originators of tuberculosis itself. The cases of acute tubercularization that I have seen may be grouped so as to form three varieties, which we may call the insidious, the active febrile, and the adynamic.

"In the first variety the child is observed to be languid, to be unwilling to make exertion, sits or lies about, leaves its playmates, is dull and heavy or irritable in temper; the skin is hot, but the degree of heat varies much. At some parts of the day it is scarcely greater than natural; at others it is, as the mother says, burning. The thermometer shows that there is an appreciable difference in the temperature at different parts of the day and on different days. At times it is almost or quite natural; at times it rises to 102° , and even higher. On the whole, the elevation of temperature is most marked at night. Usually when the temperature is high, the cheeks, one or both, are flushed. It is the irregular feverish heat which makes the greatest impression on the mother. The pulse is always frequent, but very rapid when the temperature is high. The tongue is furred more or less, and the lips and nares dry, and often bleeding from picking. The appetite is lost or variable, and only to be excited by tasty and indigestible substances; the bowels confined or irregular; the stools more or less clay-like, or putty-like, or pale, or party-coloured and offensive. The abdomen is free from tenderness and normal in form. There is usually a trifling cough, rapid breathing, and may be the physical signs indicative of slight catarrh, or the respiratory murmur is rough, respiration more blowing than natural. From first to last the child steadily, and if the febrile disturbance be considerable, rapidly loses flesh.

"All the special symptoms I have mentioned may vary in severity, and sometimes one, sometimes another gives a peculiar feature to the case. Now, the fretfulness, or headache, or drowsiness, or sleeplessness leads the practitioner to consider all the other symptoms secondary to some special intra-cranial disease. Now, it is the furred tongue and the deranged intestinal secretions which lead him to the erroneous conclusion that the febrile disturbance, &c., are secondary to the state of the stomach, bowels, or liver. Again, it may be the catarrhal symptoms that predominate, and the disease is supposed to be a bad cold on the

chest merely. The child may be ill enough only to keep the house or its room. After three, four, five, or six weeks even, the disease terminates in one of two ways, either some one organ becomes so gravely affected as to cause death with symptoms unequivocally referable to that, or the child recovers.

"If the child dies we find after death, in addition to the lesion which caused death, gray granulations scattered through the lungs, the liver, the spleen, the kidneys, under the pleuræ and peritoneum, and gray and yellow tubercles in the lymphatic glands, especially the bronchial and mesenteric. Note that I tell you that gray as well as yellow are found in the lymphatic glands. You will find it stated generally in books that gray tubercles are not found in the lymphatic glands. This is indisputably an error. They are common enough in the interior of all the lymphatic glands.

"Suppose the child to recover, what was the condition of its organs?—undoubtedly they too were the seat of tubercle. An acute deposit of tubercle is constantly recovered from. It is by no means a necessarily fatal disease; nay, I feel satisfied that recovery from it is very common. The foundation for a belief in the possibility of recovery from an attack of acute tuberculization rests mainly on anatomico-pathological ground, or on these superadded to the history of the patient.

"After death we every now and then find scattered through the lungs solid nodules, varying in size from a swan-shot to a large pea, and may be even larger. On section we find the centre formed of a hard, tough, almost black airless substance; about the margin of this we may find a number of small gray granulations, each surrounded by black pigment-loaded tissue; and then again, perhaps, outside these transparent gray granulations free from pigment, and evidently deposited during the last illness of the patient. The centre of such a nodule is formed of obsolescent tubercle, the layer around of tubercles becoming obsolescent. The patient has manifestly had three attacks of acute tuberculization, from two of which he had recovered, for obsolescence is evidence of recovery, and in the third of which he has died. The bronchial glands, &c., in many cases give equally valuable and trustworthy evidence of recovery from acute tuberculization.

"With reference to diagnosis in these cases, it rests mainly on the irregular febrile disturbance, *i. e.*, the high but variable temperature lasting for some time, and the steady loss of flesh, with the absence of any evidence of local lesion of a grave kind. The gravity of the case is constantly, even by the experienced practitioner, unappreciated till some one organ is suddenly so severely affected as to place life in the greatest danger.

"I will sketch for you a case that occurred long ago in my own practice, and made an impression on me not to be forgotten. The patient was five years of age, and the child of a medical man. The child had recently suffered from an attack of measles, from which it had recovered quickly, but had soon seemed ill again. She lost her appetite, and sat about listlessly, neglecting her toys, not all day, but only playing with them occasionally, and then with little spirit. Her brothers and sisters worried her. She was taken out of doors; was thought by her mother and myself, even at that time, to want routing. Routing did not answer,

and she was noticed to flush in the face and be feverish at night. Now I observed her tongue was loaded, and learned that she had been coaxed with tasty, indigestible food; so I said, 'It is all error of diet.' The diet was regulated, but the child did not improve. On going in one day, and seeing the child look brighter, more lively, and its skin cool, I said, 'Jenny is better to day.' 'Oh no, I assure you,' was the reply; 'she seemed as well yesterday afternoon, and then all last night she was in a burning fever.' I examined the stools; they were fetid, dark, and too solid. 'Yes, it is no wonder that with such a state of secretion the child is feverish at night,' I said: 'A dose of gray powder and jalap will put all right.' But it did not put all right. The excreta were improved; the diet was all that could be desired; and then I began to think, is not the mother making more of the ailment than it deserves? And so one, two, three weeks wore on, when a sudden attack of convulsions occurred, and in three or four days the child was dead from tubercular meningitis. Every organ in the body was found, after death, to be the seat of a recent deposit of gray granulations.

"In the active febrile form of acute tuberculization the febrile symptoms are more decided from the onset, and the patient at an early period is confined to bed. In the third or adynamic form of acute tuberculization, the illness begins somewhat suddenly, after at least a trifling sense of malaise of a few days' duration. The symptoms are chilliness, hot skin, frequent pulse, moist furred tongue, headache, loss of appetite, confined bowels, vomiting, considerable sense of weakness, great unwillingness to be disturbed, with irritation of temper. After a week or ten days, the mind wanders occasionally. The bowels are usually confined, and the abdomen flat or concave. Now and then, however, the stools are relaxed, and the belly swollen. The skin continues hot, dry and harsh,—the tongue becomes dry and brown; sordes collect about the teeth; prostration is extreme; and the patient sinks about three or four weeks after the onset of the disease."

REPORTS
ON THE
PROGRESS OF THE MEDICAL SCIENCES.

July—December, 1861.

THE intention of the following Reports is to pass in review the principal additions to each department of Medical Science which have been placed on record during the preceding six months. It is not contemplated that they should be confined exclusively to the notice of what is new; any fact or doctrine which may be considered practically useful will, although not strictly novel, be regarded as worthy of commemoration. It must be obvious to all who are aware of the immense mass of information which is almost daily put forth by the medical press of this and other countries, that the notice of every subject would be an impossibility. It therefore devolves upon the writers of each Report to select only such articles for retrospection as may possess superior recommendations, either of an intrinsic character, or in relation to the main end and aim of all medical knowledge—the alleviation of suffering and disease.

I.

REPORT ON PRACTICAL MEDICINE.

A Manual of the Practice of Medicine. By GEORGE HILARO BARLOW, M.D., Fellow of the Royal College of Physicians, Senior Physician to Guy's Hospital, &c. (*Second Edition*, 12mo, London, Churchill, 1861, pp. 738.)

It is no easy task to write a work on the practice of medicine which will meet the wants of the present times of change and transition, and this task is not rendered more easy by having to condense what is written within the limits of a manual. It is scarcely possible, perhaps, for any single man, not even for him who is best informed and most divinely gifted, whoever he may be, to sum up impartially and fully all the essential points in the conflicting evidence, past and present, of which notes ought to be taken by any one who sits in judgment in such a case. Nay, the notes of a whole bench of such judges, might omit some of these points. That the present manual is far from perfect, no one, therefore, will be surprised to learn. At the same time we are glad to notice a considerable improvement in the present as compared with the first edition. "I have," says Dr. Barlow, "carefully revised the whole, rewritten some parts, and added no inconsiderable amount of new matter. In doing this, I have been obliged to discuss several questions, concerning which there have of late arisen differences of opinion amongst medical practitioners. Of these I may mention the treatment of inflammation; and upon this most important subject I have in some degree modified the practice recommended in the former edition, though I believe the principles there adduced to have been sound." Now this point, that of the treatment of inflammation, is that one in which, as we thought, the first edition was most faulty, and as the modification referred to is certainly a change for the better, we have much more pleasure than we had formerly in recommending this volume to the notice of our readers. A book written by the Senior-Physician of Guy's Hospital, and having the *prestige* belonging to one of Mr. Churchill's manuals, ought to be a good one.

Lectures on the Germs and Vestiges of Disease, and on the prevention of the invasion and fatality of disease by periodical examinations. Delivered at the Royal Infirmary for Diseases of the Chest. By HORACE DOBELL, M.D., Physician to the Royal Infirmary for Diseases of the Chest. (8vo, London, Churchill, 1861, pp. 198.)

The chief object of these lectures is to show the extreme importance of those slight deviations from the normal health which are commonly looked upon as little worthy of the physician's thought and care, seeing that we may always detect in these deviations, if we only look carefully, the vestiges and germs of disease, which, with proper care, may often be destroyed and eradicated. Another object is to advance certain ingenious speculations upon disease and death as arising in altered conditions of a V.M.F. (or vitalized mode of force), and of a L.M.F. (or lifeless mode of force); and to propose a plan of periodical examinations by which persons may have a better chance of being kept well or prevented from getting worse.

Dr. Dobell begins his first lecture abruptly thus:

"Gentlemen,—We are justified in attempting the practice of our profession only in proportion to our belief in the articles of the following creed:—

1. That man may be the instrument through whom the invasion and progress of premature destructive changes in the human organism may be prevented or arrested.
2. "That man may be the instrument through whom the damaged organism may be more efficiently repaired.
3. "That man may be the instrument through whom the sufferings of the human being may be alleviated."

Elsewhere, after repeating this creed, he proceeds to say:

"In what sense the organism is capable of accomplishing these ends *without* the instrumentality of man, I have shown you by numerous arguments and examples. I have also shown you the various modes *by which it becomes deprived of this capability*. The conclusion at which I now arrive is this, that man may be the instrument through whom *the capability of accomplishing these ends may be preserved and restored to the organism*.

"The manner in which man is to exercise this instrumentality is the next point for our consideration. But I think we have almost reduced it to a necessary conclusion. For as we have plainly seen that the organism is competent to take care of itself, provided that it possesses a normal V.M.F., and is surrounded by normal conditions of life; and as we have also seen that the great causes of defect in the V.M.F., are *the vestiges of disease and abnormal conditions of life*; and as we have also learnt that the diseases, from which the vestiges result, are *invited*, by defects of the V.M.F.; and that when thus invited and received into the organism, they are capable of being disposed of without leaving vestiges behind, if the V.M.F. is free from excessive defect; that thus these vestiges are due to defective V.M.F. And as we have learnt that the earliest invasion of defects in the V.M.F., upon which all the long

and intricate succession of ills depend as their germ—as we have learnt, I say, that this state of germination exists at a period anterior to the manifestation of disease in its ordinary characters, and that it is to be found in the garb of slight impairments of the general health, the indications of which are more and more evasive and occult, the earlier the *stage of germination*; and, finally, as we have learnt that it is in this *occult and evasive stage of germination that the defect is most easily and most efficiently to be remedied*: I think you will agree with me in the practical conclusion at which I have arrived.

“That the manner in which man is to exercise his instrumentality for the prevention of disease, the prevention of the vestiges of disease, and the prevention of fatality in disease, is to search out these earliest evasive periods of defect in the physiological state, and to adopt measures for their remedy. This appears to me to be the highest, the most ennobled duty of the physician, calling for the most abstruse knowledge of the science of life, the deepest experience in disease, the keenest exercise of the perceptive faculties, the calmest, most far-sighted reasoning, and the wisest judgment,—a duty as much above the management of acute disease as to rule an empire is above fighting a pitched battle.”

With respect to the proposed periodical examinations, Dr. Dobell says:

“I wish, then, to propose, as the only means by which to reach the evil and to obtain the good, *that there should be instituted, as a custom, a system of periodical examination, to which all persons should submit themselves, and to which they should submit their children.*

“Such an examination must include an inquiry into the family history, to learn the hereditary constitution; into the personal history, to learn all the previous diseases that have been passed through, and the habits and vicissitudes of life; into all the conditions of life surrounding the individual; into the condition of the organs and functions of the body; into the state of the secretions and fluids of the body by analyses and microscopical examinations; and so forth.

“The examination should be reported in writing; and, after due consideration, such advice must be given as a careful judgment may dictate, for the future conduct, pursuits, and habits of the patient, with a view to correcting any defects or tendency to defects in the organism. Advice must also be given as to the means of removing any vestiges of disease that have been detected, or if they are not removable, advice as to the best way of overcoming their influence or of averting their increase. To this must be added precautions to be adopted in certain contingencies which, according to the judgment of the case, appear probable.

“If such a plan as I have here proposed were to be faithfully and conscientiously carried out by the present and rising generation of well-educated studious medical men, I think no one can doubt, after a careful consideration of the subject, that immense benefit would be conferred upon the public. The next question is, then, what would be the effect upon the profession in a pecuniary and in an ethical sense. With regard to the pecuniary question, it is only necessary to observe that of course I do not expect that any man in good practice, whose time is profitably employed, could conduct such an examination and give such advice for the usual consultation-fee. That is, of course, out of the question.

Every man who attempts to follow out the plan, will, I hope, require such a fee as shall enable him to give the necessary time and consideration to every case.

"But this should in no way interfere with the power of the *poor* to participate in such a system. Every hospital and dispensary should institute a distinct department for the conduct of such examinations, and for giving the necessary advice. Every patient discharged from its wards should be submitted to this department before returning to the duties of life." * * *

"The enormous quantities of medicine dispensed in the out-patient departments of hospitals and dispensaries for the *temporary relief* of this class of functional derangements and local diseases—for complaints which might be prevented by the patients themselves if they were properly informed of the causes and premonitory symptoms of their maladies—these are facts which must be perfectly familiar to all my hearers. Such a system of examination and advice as I propose, if properly carried out, must strike at the root of these evils, and would at the same time reduce the miserable over-crowding of the hospital waiting-rooms, and the enormous expenses incurred for drugs. These are considerations which, however important as elements of social and political economy, are elevated far above the rank of financial questions by the fact I have endeavoured to demonstrate in these lectures, that *by these same means, and at the same time, we shall so largely promote the economy of life.*"

Medical Climatology, or a topographical and meteorological description of the localities resorted to in winter and summer by Invalids of various classes, both at home and abroad. By R. E. SCORESNY-JACKSON, M.D., F.R.S.E., Lecturer on Materia Medica and Therapeutics at Surgeon's Hall, Edinburgh, &c. (Post 8vo, London, Churchill, 1861, pp. 509.)

A work like the present one deserves a warm welcome. Various writers, in various languages, have supplied a large amount of information upon the climatology of particular places and regions, and every day (witness the contributions of Drs. Bennet and Dalrymple, which are noticed in the following articles) fresh contributions of value and interest are added to the store; but a general and trustworthy view of the subject was both wanting and wanted.

"It is six years," says our author, "since the scheme of the present work was first projected, not at that time with a view to publication, but to serve for my own private use. Since then I have had additional opportunities of judging, from personal experience, of the sanative influence of the principal winter resorts in the south of Europe and the north of Africa. Since then, too, I have spent three summers amongst the French, Swiss, and German spas. I have also read every work upon climate and cognate subjects, that I could procure." This is a good deal to say, but that it is not saying too much there is intrinsic evidence in the text to show. The book, moreover, is written in a proper spirit. "I have," says our author, "no particular climate to

eulogise above its fellows, no personal interests to serve. I have written for the accommodation of professional men, and I do not intend, except perhaps in rare instances, to be used as a *guide* by the invalid who will, if he rightly understand his own welfare, be only subject to his own medical adviser." The work is dedicated to Mr. Alexander Keith Johnson, than whom is no one more deserving of such a compliment, and a chart is supplied by this gentleman, which not a little enhances its value—a chart of medical climatology, showing the mean temperature of the principal places on the globe, and the summer and winter temperatures of the principal meteorological stations in central Europe and the British Isles.

In so comprehensive a subject it is not to be expected that all parts will be or can be treated with equal care and completeness. Of this, however, we are sure, that a reader whose object is to gain information about Algiers and Algeria, about the many winter residences and summer resorts of France, Germany, Switzerland, or his own country, or about mineral waters, will not be disappointed. In some instances the information supplied will contradict common impressions. Nice, for example, is not the all-desirable place as a winter residence, which many think it to be, and what is said about this place may serve as a fair illustration of the way in which the climatology of a particular place is treated.

"NICE.—The south-eastern boundaries of France have again extended themselves, so as to embrace the long-coveted and oft-contested borderland of Savoy; and they who now invoke the healing powers of a Nissian atmosphere, render themselves no longer amenable to the laws of Italy, but to those of her powerful neighbour. Nice is situated in Lat. $43^{\circ} 41' N.$, and Long. $7^{\circ} 6' E.$, occupying a site remarkable for its mountainous protection towards the interior, whilst, at the same time, it enjoys the advantage of a southern aspect, laved by the waters of the Mediterranean. On his arrival at Nice, an invalid might well exclaim, *Surely I am safe here!* He might naturally suppose, on examining the outline of the surrounding mountains, that he had at length found a place where no evil winds could reach him, and where the vicissitudes of temperature could not be very marked. For a long time Nice enjoyed a reputation such as was likely to accrue from a careless observation of her physical constitution and relations; but the light of experience has gradually dispelled the shades which had previously mantled the insidious onslaught of her morbid agencies, so that in the present day but a comparatively small selection of cases are sent there. The mountains, forming part of the system of Maritime Alps, which surround Nice, constitute to a considerable extent a barrier against winds blowing from the interior; but they are insufficient when challenged for the protection of consumptive invalids. Winds from various quarters gain access to the devoted valley, either by surmounting the obstacles in their way, or by searching through well-marked breaches in the mountain chain; and having once gained access to it, they sweep along its surface with a destructive vehemence beneath which organised beings of every class shrink in dismay. The north-west wind or *mistral*, so well known in Provence, and in Southern Italy, too, does not pass over Nice without leaving traces of its pernicious effects. Roubaudi characterises it as one of the most vehement of the winds that

infest the valley, into which it gains access over the top of the mountain-range, which opposes a too feeble barrier in the way of its approach. It lasts according to him, sometimes for three, seven, or even nine days at a time, although, on ordinary occasions, it ceases after a duration of twenty-four hours. In point of frequency the *mistral* ranks high, contesting successfully, in winter, with the north-east, the north-north-west, and north winds: whilst in autumn it assumes an actual preponderance over the other prevailing winds from the north and east. M. Carrière says of the north and north-east winds, so frequent during the cold seasons, that whilst they have not the impetuosity of the *mistral*, nevertheless they partake of some of its imperfections. The north he characterises as dry and keen, especially in spring. This wind, however, is not so much felt as that from the north-east, for it appears rather to pass over the town, and fall upon the sea at a considerable distance from the shore; the latter is cold and piercing, and falls more directly upon the lower part of the valley. Of the easterly winds, Dr. Farr, in his work on the climate of Nice, says, 'Independently of the *mistral*, from which Nice is more sheltered, from its topographical situation, than many other parts of Provence, the easterly wind sets in with the first moon in March, called by the natives the Blood-red Moon; it is severely felt by the invalid and those in delicate health, and even the strong feel and acknowledge its evil tendency. Last season the number of patients of all nations labouring under affections of the chest might have amounted to thirty; the great majority had greatly improved their state of health up to this period, and they were daily to be seen like butterflies in the sun, riding, driving, and walking over hill and dale. I besought those whom I attended, and many whom I did not, to quit Nice before the birth of this fatal moon; but they heeded not my counsel, and thought I had overrated the danger. They remained; and the day after this easterly wind began, of the thirty I only met one afterwards, and him I had often previously pronounced to have no disease of the lungs.' The winds which blow from the southward are generally mild and humid; but the south-west (*libeccio*) is an exception, being as pernicious at Nice as elsewhere. The south-south-east and analogous winds, M. Roubaudi says, are equally injurious in their effects upon man and plants. They are particularly baneful to persons of delicate constitution and nervous temperament, especially to females and hypochondriacs, in whom they occasion a relaxed state of the system accompanied by a sense of general weariness, loss of energy, and depression of spirits. The *sirocco*, however, has not the character it bears in the south of Italy, being much modified by its prolonged journey across the Mediterranean.

"The climate of Nice is marked by a dry, irritating atmosphere, which is not at all suitable to persons in whom there is a tendency to inflammatory symptoms of the chest. The temperature is fitful and often extreme in its ranges, especially in the difference between that of day and night. The mean annual temperature, from eighteen years' observation, is 58.90, and that of the seasons as follows: Winter, 46.33; spring, 55.92; summer, 71.83; and autumn, 61.52; the difference between the mean of winter and summer being 25.50; and that between the hottest and coldest month of the year, 29.45. The winds which prevail from sunset to sunrise are those *off the land*, whereas those

which occur during the day proceed from the sea; the former are cold and dry, the latter mild and somewhat humid. This alternation of land and sea-breezes is well sustained, and causes marked changes of temperature at the periods of transition, especially when the two classes of wind come into severe collision, or when a third wind is imported into the struggle; and then meteorological phenomena even of an alarming nature sometimes ensue.

"The annual fall of rain is estimated at 26 inches, which is precipitated at irregular intervals, sometimes very suddenly, and usually in large quantities at a time. A great deal of rain falls between October and November, leaving the winter and spring months tolerably clear. The Nissians are subject to acute inflammatory affections of the membrane lining the air-passages, as well as to gastric complaints of an irritable character. Although the climate of Nice cannot be recommended in cases where affections of the throat and chest partake of an inflammatory type, or in diseases complicated with gastric or irritable dyspepsia, nevertheless there are cases of an opposite nature, in which a winter residence there might be prescribed with advantage. Sir James Clark recommends Nice as a resort for persons afflicted with that kind of bronchial disorder in which there is 'copious expectoration,' whether complicated with asthma or otherwise. In chronic rheumatism and gout; in scrofulous complaints; in the delicacy of childhood; in dyspeptic cases of a low, nervous, but not inflammatory type; in cases of uterine derangement in early life in which chalybeates are indicated; and in other cases where there are marked symptoms of debility and relaxation proceeding from a long residence in hot countries, he recommends Nice. Whilst residing at Nice, invalids should remember that the warmth which they feel from the direct rays of the sun falling upon them is not really the proper temperature of the atmosphere; so that by passing suddenly from sunshine to shade they proceed as rapidly from a high to a much lower temperature. In taking out-door exercise they should clothe themselves conformably to the indications of a thermometer placed in the external atmosphere, and kept always in the shade; and they should likewise be careful to preserve themselves from the too powerful rays of the sun by means of a light umbrella or parasol. *La Croix de Marbre*, the English *banlieue* of Nice, as is very often the case in winter resorts, is the most objectionable part of the town, exposed as it is to the full force of the mistral and the libeccio. My own personal experience of Nice is confined to that of a short residence in it during spring; but it is quite sufficient to satisfy me that no one need go there in search of health who is not prepared to adhere strictly to a careful regimen; for I can conceive of no place in which the hearty co-operation of the valetudinarian himself is more urgently demanded in order to derive any benefit from a winter's sojourn in it."

Meteorological and Medical Observations on the Climate of Egypt, with Practical Hints for Invalid Travellers. By DONALD DALRYMPLE, M.D. (Post 8vo, London, Churchill, 1861, pp. 80.)

It is the fashion at present to send patients needing a mild winter climate to Egypt, and now and then a patient anxiously inquires after a book in which he may find all the necessary information for the journey. A patient asked this question this very morning, and the answer of the writer was a recommendation of the book now under consideration. This book happened to be on the table, but the answer was by no means a hasty one. In a word, Dr. Dalrymple has written a work which has the combined merits of being short and readable, and yet full enough—a work which may be recommended as a valuable handbook, not only to the patient going Nileward, but also to the medical man advising him to make this journey, for it cannot be doubted that this journey is often advised and undertaken upon a very imperfect basis of facts.

Mentone and the Riviera as a Winter Climate. By J. HENRY BENNET, M.D., Physician-Accoucheur to the Royal Free Hospital, &c. (Post 8vo, London, Churchill, 1861, pp. 112.)

This volume will, if we mistake not, send many to Mentone and the Riviera who, fleeing from the ungenial climate of the north, now migrate in the autumn to Nice. Mentone is a small, Italian-like town, of 5000 inhabitants, situated in latitude 42° , twelve miles east of Nice, at the foot of the Maritime Alps. It is the first station out of Nice on the Cornice road to Genoa, the largest town in the principality of Monaco, and very recently it has been annexed to France along with Nice. The coast line of the gulf of Genoa is known under the name of Riviera di Levante, and Riviera di Ponente, or Eastern and Western Riviera. Our author writes charmingly and convincingly of the merits, as a winter climate, of this place and neighbourhood. He has spent two winters at Mentone, and he intends to winter there in future. The second winter, wishing to find a still more favoured locality, he sought for it in Italy, but he sought in vain; and, after suffering severely from the unhygienic state of the large towns of this classic land, he hastened back to his quarters during the first winter. All that is said about the unhygienic state of the large towns deserves to be remembered, and what is said about Naples (which is not worse than the others) we quote here, with a wish that many may have recourse to the book itself for further information upon this and other matters.

“Naples,” says Dr. Bennet, “exhibits the concentration of all the unhygienic conditions previously alluded to. More than 500,000 dirty southerners are living in an extremely confined space, in high houses, in damp, sunless streets, in the midst of every imaginable abomination by

which the eye and the smell can be offended. The drains all run into the tideless sea, or on to the shore. In the most fashionable part of the town, in front of the houses occupied by the nobility and by strangers, is a narrow public garden, the fashionable promenade, 'the Chiaja,' running for a mile along the shore. On this shore eight public drains empty themselves, not into the sea, but on to the sands; thence to trickle down by slow degrees. The largest is opposite one of the chief hotels, and is usually so offensive that those who are alive to these questions always feel inclined to take a run in passing. On the land side of this garden is the main drive or street, and on each side of the pavement, as in most other streets, there are large slits in the road every few feet, a foot long and about an inch broad, to allow the rain-water to escape into the drains, which thus freely communicate with the exterior. It is between these shore drains on the one side, and the drain-ventilated street on the other, that fashionable Naples daily promenades, and it is by the side of this choice region that our countrymen live, and not unfrequently die. The picturesqueness of Naples life, closely analysed, is in a great measure that of filth, dirt, and rags. The picturesque fishermen pass their lives fishing at the mouth of these sewers. The picturesque lower orders eat, drink, and sleep, as it were, in public, windows and doors open, if they have any. They are clothed in rags, which they appear never to take off until they fall from them, and they are invested with vermin, which they scratch off each other at the street-corners. The town is surrounded by pestilential marshes, and is built on a tufa rock, or kind of pumice-stone, so porous that it lets the rain soak in twenty feet, to give it out in dry weather by degrees. Thus, moss grows in winter wherever the sun does not reach.

"A few days after my arrival in November, the autumn rains commenced, with a warm oppressive sirocco, or south-east wind. The torrents of rain that fell in the first twelve hours washed the streets and drains of their accumulated abominations into the sea. The wind and waves, on the other hand, drove them back again and again on the shore, whilst the wind, rushing up the open drains, escaped through the rain openings in the streets, and through the open closets in the houses. The smell throughout the entire lower part of the city was awful, and a considerable portion of the population was at once affected with abdominal pains, diarrhoea, and even dysentery. I was one of the first victims, and after nearly three weeks' illness was only too glad to embark on a Genoa steamer, and to return to pure, healthy Mentone, where I spent the rest of the winter.

"To conclude, however, about Naples and its bay. They are most fascinating to the mere healthy tourist, hallowed by associations and beauties of the most varied character. But to the invalid Naples should be absolutely forbidden. The defective sanitary arrangements are not the only drawbacks. When the wind is in the north-east, the Apennines in that direction are so low that it passes over them and they become covered with snow, and the cold is intense. When it veers to the south-east—the sirocco—on the contrary, the heat becomes intense, and the air, being loaded with moisture from the sea, is very oppressive. These extremes, following each other rapidly, are very trying and unhealthy. The north-west, or mistral, also frequently blows into the bay with great

violence, and is a trying, dangerous wind to invalids throughout the Mediterranean.

"As I have previously stated, the impression made upon my mind by the sanitary survey of the principal health towns of Italy was unsatisfactory in the extreme. The authors whose works I have read on winter climates have, it appears to me, made an extraordinary but all-important omission. They have studied winds, sunshine, cloud, temperature, protection, and all the various elements which constitute climate, forgetting *hygiene*. And yet are not the laws of hygiene of more importance to the invalid than all the rest put together? Of what avail is it to place a patient suffering from a constitutional disease, such as phthisis, in the most favorable climatic conditions, if every law of hygiene is violated—if he is made to live in the midst of a foul, badly drained, badly ventilated town, such as Florence, Rome, or Naples? In these unhealthy centres of southern population, where the mortality is habitually very high amongst the healthy natives (much higher, as we have seen, than in our most unwholesome manufacturing localities), what right have we to expect the general health of our patients to rally? In reality, it would be as reasonable to send consumptive patients in the summer months to live in the worst parts of Whitechapel, Liverpool, or Glasgow, as it is to send them in winter to live in the centre of these unhealthy southern towns.

"In former days, when the laws of hygiene were ignored by the medical profession as well as by the non-medical public—when fevers and plagues were merely studied and treated as inscrutable dispensations of Divine wrath, it was, perhaps, excusable for writers on climate to devote their undivided attention to meteorological questions. But now that the mist and darkness have been dispelled, that typhus fever and other town diseases have been traced to their causes—filth, defective drainage, &c.,—we know that attention to hygienic laws is even more necessary for the recovery of health than it is for its retention. In choosing a winter residence, therefore, hygienic conditions should be first considered, even before warmth and sunshine.

"If we are to be guided by such considerations, however, I must candidly confess that I have not yet seen a large town in the south of Europe (the health quarters of Nice and Pau excepted), the hygienic state of which is such as to render it a safe winter residence for an invalid. In most of these towns, moreover—Rome, Florence, Pisa, Naples—the positions selected for and devoted to invalids are central, and owe their protection in a great measure to buildings which secure to them the town atmosphere undiluted. Thus is explained the frequent deaths from 'fever' amongst our countrymen, ill or well, residing in them, which we every year see chronicled. On the spot you are told that they have died from the fever of 'the country.' But this fever of the country, as far as I could gather from minute inquiry, is no other than our own old enemy, typhus, under a continental garb. Its characteristic features may be modified by some malarious or catarrhal element, but the type is the same. The cause, too, is identical in the Italian marble palace and in the St. Giles's hovel—foul air inside and outside the house, everywhere."

Health and Disease, as influenced by Daily, Seasonal, and other Cyclical Changes in the Human System. By EDWARD SMITH, M.D., F.R.S., Assistant-Physician to the Hospital for Consumption at Brompton, &c. (Post 8vo, London, Walton and Maberly, 1861, pp. 409)

As every one knows, or ought to know, Dr. Edward Smith has been for long engaged in a series of most elaborate investigations upon himself and others, in which the object was to ascertain the rate of pulsation and respiration, and the elimination of urea and urinary water at different times of the day and night, in different seasons, and under different circumstances as to food, exercise, and so on. Nor have these investigations been wanting in important results. On the contrary, every one who is acquainted with them will acknowledge that they necessitate the reconsideration of many of the doctrines which are now applied to the preservation of health and the treatment of disease. How far some of the conclusions of the author will bear the test of future inquiry remains to be seen, but of the value of the facts from which these conclusions are drawn there cannot well be two opinions.

The remarks upon urea, as a mixed product of the destruction of tissue and the conversion of food, appear to us particularly interesting and important. They may also be cited as a fair illustration of the author's matter and spirit.

"The true value which should be attached to the production of urea is yet unknown, for one party affirms that it is a measure of the waste of the tissue, while another believes it to be chiefly due to food. There is no question in physiological chemistry on which so many observers are engaged as upon this, and it is probably destined to overturn many of the theoretical views of nutrition which have of late years occupied our text-books. The directions of inquiry seem at present to be three—1st, the waste of muscular and other tissues; 2nd, the assimilation of food; and 3rd, the excretion of food in that part which is not used in the support of the system; and we will in a few words point out a few facts for reflection.

"From various sets of inquiries in which we have been engaged we find—

"1. When the treadwheel is worked for a short period, say one and a half hour, in the absence of food, there is no increase in the *elimination* of urea during that period.

"2. When the treadwheel is worked with ordinary food, the increase of urea is not more than 5 per cent. over the quantity which is eliminated with very light work and with the same food. Hence the direct effects of violent exertion in the production and elimination of urea are not very great under any circumstances.

"3. When two different dietaries are provided, varying in nitrogen, but the exertion always remaining the same, there is the greatest excretion of urea with the diet richest in nitrogen. After an unusual dinner, or after a public dinner, there is a larger excretion of urea. In flesh-feeding animals the nitrogen in the urea represents the nitrogen in the food.

"4. When, in the absence of food, an unusual quantity of water is taken alone, there is an elimination of two or three times the amount of urea that would have occurred if no water had been drunk, and much more than if the ordinary food had been taken.

"From such facts there is reason to believe—1st, that with sufficient food the product of muscular waste cannot be dissociated from that of the transformation of food, and that the urea is chiefly derived from the nitrogen contained in the food after it has fulfilled its duty as an excitant of vital action; 2nd, that excess of nitrogenous food passes off as urea; 3rd, that urea must exist largely in the blood with the extra-vascular fluids, either in its perfect state or in a state ready for the final transformation, and can be readily washed out of it.

"Hence it is quite open to question, if the necessity of the system for nitrogen be chiefly to supply a waste of tissue proceeding from exertion (and this is the more questionable that a large minimum quantity at all times leaves the body as urea in the state of perfect rest), and if it be not rather necessary, as we have shown in reference to carbonic acid, for the purpose of promoting the assimilation of food. It is evident that there cannot be any increase of urea from muscular exertion, unless the weight of the muscle be lessened, since the supply of nitrogen will run *pari passu* with the excretion of it, and the total quantity to be emitted from the body will remain the same.

"It is worthy of the deepest consideration that, whilst urea is said to be the product of waste of tissue, and yet is not emitted in any degree in proportion to the exertion made, carbonic acid, which is said to be the product of the conversion of the hydro-carbons, is influenced in a marked degree by the least amount of exertion, and increases *pari passu* with increase of exertion. This, surely, rather points to the connexion of the production of carbonic acid from muscular force, and that as a direct act, as well as from its influence over the transformation of food.

"Hence we must not infer that there is a progressive increase in the waste of the body as age advances, because during the period under discussion there is an increased emission of urea, but rather that more food is taken, and perhaps taken in excess. The diminution in the excretion of urea in proportion to the weight of the body is evidence that a part of the nitrogen becomes fixed in the tissue during the period of growth."

A Handbook for Southport, Medical and General, with copious Notes of the Natural History of the District. By DAVID H. McNICOLL, M.D., Physician to the Southport Sea-Bathing Infirmary. Second edition. (12mo, London, Churchill, 1861, pp. 219.)

Dr. McNicoll gives us in this small handbook all the information which can be required concerning Southport as a sanitary resort, and he does more than this, for he enters largely and clearly into the botany and zoology of the place and its neighbourhood. His object in entering

into these latter matters is a very worthy one, viz., that of encouraging useful and agreeable mental occupation in those visitors whose stay is more or less protracted.

Epilepsy; its Symptoms, Treatment, and Relation to other Chronic Convulsive Diseases. By J. RUSSELL REYNOLDS, M.D., Fellow of the Royal College of Physicians, Assistant-Physician to University College Hospital, &c. (8vo, London, Churchill, 1861, pp. 360.)

On Epilepsy and Epileptiform Seizures, their Causes, Pathology and Treatment. By EDWARD H. SIEVEKING, M.D., Fellow of the Royal College of Physicians, Physician to St. Mary's Hospital, &c. Second edition. (Post 8vo, London, Churchill, 1861, pp. 336.)

Epileptic and other Convulsive Affections of the Nervous System, their Pathology and Treatment. By CHARLES BLAND RADCLIFFE, M.D., Fellow of the Royal College of Physicians, Physician to the Westminster Hospital, &c. Third edition (incorporating the Gulstonian Lectures at the Royal College of Physicians for 1860). (Post 8vo, London, Churchill, 1861, pp. 312.)

Dr. Reynolds' is a new and very readable work. Dr. Sieveking's and Dr. Radcliffe's are new editions—the one a second, and the other a third—of works which have been for some time before the profession. Dr. Reynolds confines himself to idiopathic epilepsy; he has nothing to do with so-called symptomatic or sympathetic epilepsy. Dr. Sieveking treats of epileptiform disease as well as idiopathic epilepsy. Dr. Radcliffe ranges over the whole field of diseases in which spasm, convulsion, or tremor, are characteristic symptoms—in which, that is to say, any form of exaggerated and involuntary muscular motion is to be met with.

Dr. Reynolds works upon the "numerical method," and dedicates his work to Dr. Walshe, the ablest exponent of this method in this country, and without doubt he proves himself a worthy disciple of his distinguished master. He has also a fair groundwork of statistics, for the number of cases analysed is eighty-eight. Private statistics also form a marked feature in Dr. Sieveking's work, 104, that is, fifty-two more than those introduced into the first edition, being the number of cases commented on. Dr. Radcliffe treats his subject in a different manner and from a different point of view, and as this view is not considered, except in the most incidental manner, by either of the previously mentioned writers, it is necessary to read his work as well as theirs in order to see how differently the same subject may appear to three thinking men writing and working contemporaneously. To this remark we would only add these—that Dr. Sieveking's second edition is a considerable improvement upon his first; that Dr. Reynolds furnishes us with much valuable information upon many points, especially upon the inter-paroxysmal state, and the diagnosis of epilepsy; and that Dr. Radcliffe's third edition, in addition to incorporating the Gulstonian Lectures delivered at the Royal College of Physicians in 1860, is so altered as to be a new book rather than a new edition.

On Paralysis of the Lower Extremities, consequent upon Disease of the Bladder and Kidneys (Urinary Paraplegia). By WM. GULL, M.D., Physician to Guy's Hospital, &c. ('Guy's Hospital Reports,' 3rd series, vol. vii, 1861.)

The evidence advanced in this paper shows very clearly that we must pause before we can agree with Dr. Brown-Séquard in looking upon urinary paraplegia as synonymous with reflex paralysis from disease of the urinary organs, the result of a reflex contraction of the blood-vessels upon the nutrition of the several structures concerned in muscular motion.

Dr. Gull dismisses as invalid the proof from experiments on animals that urinary paraplegia arises from a reflex impression on the blood-vessels. "*I have seen*," says Dr. Brown-Séquard, "a contraction of blood-vessels in the spinal cord (in the vessels of the pia mater) taking place under my eyes, when a tightened ligature was applied on the hilus of the kidney, irritating the renal nerves, or when a similar operation was performed on the blood-vessels and nerves of the supra-renal capsules." He further adds "Generally, in those cases, the contraction is much more evident on the side of the cord corresponding with the side of the irritated nerves; which fact is in harmony with another, and not rare one, observed first by Comhaire (as regards the kidney), and often seen by me after the extirpation of one kidney or one supra-renal capsule; that is, a paralysis of the corresponding lower limb."

In reply to this statement, Dr. Gull says that, "on laying bare the spinal cord and membranes in dogs and rabbits (the animals selected by Dr. Brown-Séquard), no other vessels are visible in the dorsal and lumbar regions than small veins, namely, the dorsal vein and its tributaries. The columns of the cord are seen white and glistening through the membranes. There is not any structure which in itself deserves the name of pia mater, such as exists over the convolutions of the brain. Nor are the columns of the cord much more vascular than tendons. There are no visible vessels on them, nor in the membranes, except those which have been mentioned. It was, therefore, a matter of surprise that these vessels should have been seen to contract; and on placing a ligature on the vessels of the kidney, and irritating the renal nerves, certainly no visible effect was produced—the vessels under observation underwent no change. If our surprise was great at the distinctness with which it had been stated that the vessels of the membranes generally had been seen to contract when the renal nerves were irritated, it was greater still at the further remark, 'that the contraction was more evident on the side of the cord corresponding with the side of the irritated nerves;' for such vessels (venules) as are visible in the membranes of the cord are so distributed as to render it apparently impossible that those of one side only should be made to contract. They ramify without any limitation to one side of the cord or the other. Further, the occurrence of paralysis in the lower limb, corresponding to that side on which the kidney was irritated, or the supra-renal capsule removed, appears to have

nothing whatever to do with reflex paralysis. Such a result does not follow if care be taken not to injure the lumbar or psoas muscles, in exposing the kidney, and putting a ligature upon it. We found that the animals experimented on used both lower extremities equally well, after the extirpation of one kidney or the other. As they walked, we could not in the least conjecture from their gait which kidney had been removed. After this careful inquiry, we must say we can discover no evidence, from experiments on animals, for a theory of reflex paraplegia.*"

Nor are we at liberty to conclude that the clinical history of the disease is more in accordance with the theory of mere capillary disturbance. The symptoms, according to Dr. Gull, contradict most of those ascribed by Dr. Brown-Séquard to urinary paraplegia, and given in the accompanying table.

URINARY PARAPLEGIA.

1. Preceded by an affection of the bladder, the kidneys, or the prostate.

2. Usually, lower limbs alone paralysed.

3. No gradual extension of the paralysis upwards.

4. Usually, paralysis, incomplete.

5. Some muscles more paralysed than others.

6. Reflex power neither much increased nor completely lost.

7. Bladder and rectum rarely paralysed, or, at least only slightly paralysed.

8. Spasms in paralysed muscles extremely rare.

9. Very rarely pains in the spine,

either spontaneously, or caused by pressure, shock, warm water, ice.

10. No feeling of pain or constriction round the abdomen, or the chest.

11. No formication, no pricking, no disagreeable sensation of cold or heat.

12. Anæsthesia rare.

13. Usually, obstinate gastric derangement.

14. Great changes in the degree of the paralysis, corresponding to changes in the disease of the urinary organs.

15. Cure frequently and rapidly obtained after a notable amelioration of the condition of the urinary organs.

"If," says Dr. Gull, "we regard the nature of the urinary disease which most commonly leads to paraplegia, we shall find that it is an inflammation, either in the prostate, bladder, or kidneys; and we shall also find that it is only after chronic inflammation has lasted a long time that the paraplegic weakness supervenes. It is in just those cases where there is most irritation, and but little inflammation, that paraplegia does not occur. Uric-acid and oxalate-of-lime calculi may cause hæmaturia and any amount of irritation, but, unless *suppurative* inflammation set in, paraplegia is not produced. A review of all the recorded cases of urinary paraplegia will show that it is the *inflammatory* condition of the urinary organs which leads to paralysis, and not one of irritation."

Dr. Gull sets aside the statement that the cord has been found healthy in these cases as of no value, and this he may well do, seeing that the examination, as ordinarily conducted, must be altogether

* "In these experiments I had the assistance of Dr. Pavy and Mr. Durham, to whom owe my best thanks for their time and trouble."

fallacious; and the conclusion at which he arrives is that urinary paraplegia arises from an altered nutrition of the cord, due to extension of disease through continuous structures to the cord itself due, in fact, to myelitis.

On Chronic Alcoholic Intoxication; or, Alcoholic Stimulants in connexion with the Nervous System. By W. MARCET, M.D., F.R.S., Fellow of the Royal College of Physicians, Assistant-Physician to the Westminster Hospital, &c. (12mo, London, Churchill, 1860, pp. 172.)

In this small volume Dr. Marcet directs attention, not to the inebriating effects of alcoholic drinks, but to an ill-understood state of prolonged or chronic poisoning, which persons who persist in drinking to excess seldom escape—a state called *chronic alcoholism* by Dr. Martin Huss, and more generally known as *chronic alcoholic intoxication*. This state, Dr. Marcet tells us, is characterised by sleeplessness, giddiness, headache, muscæ volitantes, ringings in the ears, hallucinations, tremblings, want of co-ordination of the voluntary motions, and, very frequently, a morbid condition of the organs of digestion. Many cases are given in illustration, and much is said respecting predisposing and immediate causes, but the prime object of our author is to show that there exists a substance possessed of powerful and definite medicinal properties, and having the remarkable property of restoring to health, or, at all events, of greatly relieving the disordered nervous system of persons suffering from chronic alcoholic intoxication, namely, *oxide of zinc*. Some of the results arrived at are these:

“1. That after taking this substance in doses from two grains and upwards in the case of adults, a feeling of nausea is sometimes perceived, but seldom to the extent of producing vomiting. This effect is diminished if, according to Dr. Herpin’s practice, the medicine be given about an hour after a meal.

“2. That after persevering with the treatment for some days, the medicine is in most cases tolerated, and the nausea and uneasiness produced at first diminish and even disappear.

“3. That a slight giddiness, attended with the appearance of black specks before the eyes and rumbling noises in the ears, may accompany the nausea occasioned by oxide of zinc. This is an indication of the doses being too high, and on diminishing them these symptoms disappear.

“4. A very important and remarkable effect of oxide of zinc is the power it frequently possesses of producing sleep.

“5. I have not noticed the long-continued use of oxide of zinc to produce evidently deleterious effects, even after it has been taken for a considerable length of time.”

Dr. Marcet gives several cases in which oxide of zinc was given, and given too, as it would seem, with decided advantage, and we recommend our readers to possess themselves of the work itself and judge for themselves, from the evidence given, the character of the disease described, and the value of the remedy proposed.

The Physical Examination of the Chest in Pulmonary Consumption and its intercurrent Diseases. By SOMERVILLE SCOTT ALISON, M.D., Fellow of the Royal College of Physicians, Physician to the Hospital for Consumption and Diseases of the Chest at Brompton, &c. (8vo, London, Churchill, 1861, pp. 447.)

Dr. S. Scott Alison has given abundant proof that his ability to cope with a subject like the present is of no ordinary kind. The goniometer for measuring the configuration of the chest in disease, the differential stethophone, the hydrophone, the sphygmoscope, each an important aid in diagnosis, attest this fact with sufficient plainness. It was to be expected, therefore, that such an author on such a subject would have a good deal to say, and that he will say it well; and such is indeed the case.

Dr. S. Scott Alison's chief object is to give a detailed account of the leading physical signs of the chest, &c., in pulmonary consumption. A minor, though important object, is to give some practical directions for the examination of the sufferer from this complaint, and to offer a full account of the instruments employed in exploration, of the principals of their construction, and of their mode of operation—an object in furtherance of which various papers written by the author, and published within the last few years, are added to the work. As may be expected, the subject of thoracic acoustics obtains much consideration, because this branch of knowledge proves an easy key to the physical condition of the interior of the chest; and, in particular, the undoubtedly great merits of the differential stethophone in obscure conditions of chest disease are illustrated and insisted upon.

The part of the work which will be of most interest to ordinary practical men, and which is certainly not less important for the rest, is that in which the author gives his reasons for departing from the established division of pulmonary consumption into three stages. Dr. S. S. Alison has, in fact, found perforation or pneumothorax so common an event, and so signalised with strongly marked signs, that he has been induced to make this pathological condition a stage by itself—the concluding stage of the disease.

"Phthisis," our author says, "has usually been divided into three stages, but I believe that the course I have decided to adopt in dividing this malady into four stages is more agreeable with the natural history of the complaint. Excavation, which is the characteristic of the third stage, tends to progress, and the progression to excavation naturally tends to the penetration or perforation of the pleura. But for pleural adhesions in the third stage perforation would be almost unavoidable. Perforation is a natural consequence of progressive excavation. This is more than can be said of empyema, excepting in dependence upon perforation, for it is more an adjunct to, or a complication of, the disease. There is no unavoidable tendency to simple empyema. But it is otherwise with perforation in the case of progressive phthisis. The progress of a cavity is to the surface. But putting aside mere tendency, let us inquire into actualities. I am satisfied that perforation actually occurs in a very considerable pro-

portion of advanced or old-standing cases of phthisis. I have met with many examples of perforation, and, besides, I have every conviction that cases constantly occur without their being recognised. Perforation is an accident which occurs only or chiefly when the patient is very ill, and generally long after softening or cavity has been diagnosticated. The patient's disease is so well known, that in the extreme end of his sufferings examination is not thought to be essential; and again, the exhaustion, the helplessness, the breathlessness, the agony, and the apparently near dissolution of the sufferer, argue with the physician for non-disturbance and for quietude. The frequency of perforation has lately been much brought before me. At the moment which I write (Sept. 25th, 1860) I have in the hospital two patients,—one a young woman, fifteen years of age (Weare), another a young man (Perry) about twenty-two, suffering the agonies of perforation. It was only this afternoon that I examined the perforated lung of a patient who died of pneumothorax a day or two ago. Two patients out of seventeen suffering from cavity in the lungs, at present under my care, give a large per-centage, viz., 11·7. This per-centage is doubtless above the average, but I am satisfied that it is not, what many physicians will believe it, very *greatly* above it. This rate of frequency much exceeds that which holds with cavity cases at an early period. It is to be borne in mind that cavity cases, on the whole, are seen at a late stage in the hospital, and that not a few patients are admitted in an almost moribund condition.

“Before leaving the subject of the frequency of perforation, I would add, that if we look at the deaths from phthisis in its three accepted stages, and compare them with the deaths from perforation, the latter condition assumes great prominence. Since October, 1860, I have had four deaths among my female hospital patients, and two, or fifty per cent. of them, occurred in the perforation period. During the same time I have had seven deaths amongst my male hospital patients, and one occurred during the perforation period. In private practice two deaths have occurred since August under my own eye, from perforation. What rate these bear to the total number of phthisical persons who have consulted me privately, and who have since died, I am unable to say; for comparatively few results are communicated; but it must be considerable. (Jan. 25th, 1861.)

“Further, I would submit, that during the time I have been full physician to the hospital several cases have occurred which, though I could not positively say were perforation cases, yet presented highly suggestive signs of pneumothorax, such as obscure amphoric respiration and tinkle.

“The physical signs of the fourth or perforation stage are very remarkable and interesting. A greater difference holds between these signs and those of other stages of phthisis than between those of any two of the other stages. The most conspicuous signs of the fourth stage, in reference to auscultation and percussion, are absolutely new, and not a mere increase of those of another stage. They take the place to a large amount of the signs of the third stage, to which they suddenly cause a cessation or bring an abatement.

“The physical signs of phthisis in its fourth stage are so different from those observed in the previous course of the disease, that on this

account it is not only natural, but very conducive to the avoidance of important errors in diagnosis, and even to the very discovery of the nature of the disease itself, that a broad line of demarcation should be established between this and the preceding period of the malady. To continue to treat this period as an accidental condition of the third stage is assuredly not consistent with the novelty and importance, and even antagonism, of the new signs, and with the marked alteration in the morbid anatomy upon which they depend, and with the sudden access of most distressing symptoms.

"The formation of a new stage, that of perforation, will serve beneficially to call more particular attention to the accident of perforation, and to cause this condition to be better studied, to be more looked for, and, I am convinced, to be less frequently altogether overlooked.

"The clearness or the extraordinary air character of the percussion sound which attends this stage, is so different from the dull percussion almost universally associated in the mind of the medical practitioner with pulmonary consumption, that when his first visit is made to a patient in the fourth stage he is liable to conclude that the lungs are sound, that no disease is present in these organs, and that careful auscultation is totally unnecessary. He internally says, 'Oh, what fine percussion!' I am convinced that the clearness and fulness of percussion-sound, so different from the short, flat sound believed to be almost inseparable from phthisis, has on numerous occasions led to the conclusion that the chest need not be auscultated, even when the perforation or last stage of phthisis had arrived, and the patient has been within a few days or hours of his dissolution. I have very lately met with such an example. The attendant, patting the thorax and exclaiming 'plenty of air here,' is apt to imagine that the underlying and compressed lung is more than usually healthy."

How far this definition of a fourth stage will be borne out by further inquiries remains to be seen, but that phthisis is not unfrequently brought to an unexpected and abrupt close by perforation we can readily believe; indeed, we remember three cases within the last twelve months which have thus been brought to a close.

On Mitral Regurgitation arising independently of Organic Disease of the Valve. By J. S. BRISTOWE, M.D., F.R.C.P., Physician to St. Thomas's Hospital. ('British and Foreign Medico-Chirurgical Review,' July, 1861.)

"During a period of upwards of ten years," says Dr. Bristowe, "in which I conducted the post-mortem examinations of medical cases at St. Thomas's Hospital, it by no means infrequently fell to my lot to inspect cases of reputed mitral disease, in which all the secondary effects of that lesion—pulmonary apoplexy, anasarca, nutmeg liver—were indisputably present, but in which the heart was found to present but little departure from the healthy state, and in which all the valvular structures appeared to be perfectly sound and competent. I have felt convinced, for some years past, that these cases were neither

exceptional nor rare, but have only latterly been induced to collect and compare the scattered facts on which the general opinions I entertained were based. I soon found unfortunately that, owing to imperfection in the clinical records, many of my earlier cases had lost the value they once possessed, and that more than one it had become impossible to identify. A sufficient number, however, have come under observation between October, 1856 (from which date the clinical reports at the hospital have been more accurately prepared and preserved), and October, 1860 (when my duties as pathologist terminated), to render my report, if not so complete as I could have wished, at least, I hope, not altogether devoid of value."

Occasional cases of this kind have been recorded with great accuracy and clearness, and several papers have been published, in which the subject has been handled with more or less completeness and ability, especially by Dr. McDowell, of Dublin, and by Dr. Gairdner, of Edinburgh, but notwithstanding all that has been done there yet remained much to do before the proof was complete. What remained to do Dr. Bristowe has done in the present paper, and all doubt upon the subject is now at an end. The cases given are five in number. In all there was distinct systolic murmur at the apex of the heart during life, and apparently healthy mitral valves after death. In the first there was dilatation of the left ventricle, with slight hypertrophy; in the second, hypertrophy; in the third, dilatation, with hypertrophy of heart and atrophy of the musculi papillares of the left ventricle; in the fourth, dilatation and hypertrophy of the heart, the chordæ tendineæ of the left side being on the stretch, and the mitral orifice dilated; in the fifth, hypertrophy of the heart. The last two cases, as the shortest, must serve as illustrations of the rest.

CASE 4.—*Systolic murmur at apex of heart; dilatation, with hypertrophy of the organ; chordæ tendineæ of left side on the stretch; dilatation of mitral orifice, but apparent healthiness of valve.*—J. Bunting, a potboy, æt. 56, was admitted into St. Thomas's Hospital under Dr. Peacock's care on the 12th January, 1858. He had been an intemperate man. He had been ill for about two years, but much worse for three months. His illness had consisted in cough, hoarseness, and great dyspnoea, accompanied by severe pain across the chest. He spat a good deal at first, but had never had hæmoptysis.

On admission his face and legs were œdematous, and had been so for about a fortnight, and he suffered from extreme dyspnoea. The thoracic resonance was everywhere sparing, especially below. Sibilant and sonorous rhonchi were audible over the whole chest, except at the extreme base, where the respiration was deficient. The cardiac dulness was increased in extent, especially in breadth; the first sound at the apex was flapping and prolonged. Pulse 100; urine slightly albuminous, of 1030 sp. gr.

February 3rd.—On this day a distinct, short, harsh, systolic murmur was audible over a limited space below and within the line of the left nipple. Pulse very feeble, but regular; no œdema of legs; vomiting nearly every day.

10th.—Increasing dyspnoea, hæmoptysis; heart's sound more feeble, but murmur still audible; very little œdema of legs. In this condition he continued, slowly sinking, until the 9th of March.

Post-mortem examination.—Body spare, but not œdematous. *Chest.*—

Both pleuræ presented a few adhesions, and contained a good deal of serum. The lungs were œdematous, congested, and sparsely crepitant in the greater part of their extent, but carnified and airless below. The bronchial tubes were congested, and contained a large quantity of muco-purulent fluid. The pericardium was healthy; the heart was large, and weighed sixteen ounces. The left ventricle was much dilated, its walls seven French lines thick midway between the base and apex; it was full of dark, soft coagula; and closely connected with the parietes, in the neighbourhood of the apex, was a considerable quantity of older clot, ribbed, and presenting alternated red and buff-coloured streaks, but not yet softened internally. The valves were perfectly healthy in texture; the aortic was competent; but the chordæ tendinæ were stretched, and probably prevented the mitral from completely closing its orifice. The right ventricle was relatively larger than the left; it was dilated, and its walls measured three French lines in thickness at the base. It was filled with coagula, and its valves were normal. The left auriculo-ventricular opening measured fifty-seven French lines in circumference; the right, sixty-three; the aortic measured three inches and four lines; and the pulmonic, three inches and two lines. *Abdomen.*—The liver presented a nutmeg character. The kidneys were of usual size; they contained a few small cysts, and were somewhat congested; but their surface was smooth, and they appeared generally healthy. The rest of the abdominal viscera were healthy.

Here, again, the signs of mitral incompetence were clearly displayed. The history of the disease extends over about two years. Many of the symptoms complained of were those indicative of bronchitis, but the condition of the lungs was scarcely compatible with the existence of chronic bronchitis alone, for there was neither emphysema nor dilatation of tubes. The probability is that the pulmonary symptoms were from the beginning secondary to cardiac incompetence, with which view the condition of other organs was quite accordant. Slight albuminuria was detected, but this depended evidently on mere passive congestion of the kidneys. It should be observed that in this case, as in the last, the heart was dilated as well as enlarged, and that the chordæ tendinæ appeared to be relatively short, and on the stretch. But it must be added that all the orifices, including the mitral, were unusually large; the valves presenting, notwithstanding, a healthy appearance.

CASE 5.—Hypertrophy of heart; apparent healthiness of mitral valve; systolic murmur at apex.—Michael Groude, a carman, æt. 41, was taken into one of Dr. Barker's beds on the 18th May, 1858. He had had cough every winter for eleven years. Had never suffered from rheumatism. His present illness began eight weeks ago with cough, short breath, and œdema of the legs. For the last five weeks he has complained of severe palpitation on walking or any other exertion. All the above symptoms have gradually increased in severity, and the urine has become scanty.

On admission he had severe paroxysmal cough. The legs were very œdematous and tense; the pulse small and irregular, and he lay in a semi-recumbent posture from partial orthopnoea. On examining the chest, general bronchitic râles of a large mucous character were audible in all parts. The cardiac dulness was enlarged, and a systolic murmur was audible with the heart's action, most distinct at a point an inch below and internal to the left nipple. The urine was albuminous.

There was no great change after admission. He was slightly improved for a time by counter-irritation, diuretics, and purgatives; but the anasarca soon after increased, so as to require relief by acupuncture. He died on the 11th June.

Post-mortem examination.—Height, 5 ft. 9 in.; weight, fourteen stone;

anasarcous in an extreme degree. *Chest*.—There were numerous firm adhesions and a little serum in both pleuræ. The right lung was voluminous, but not emphysematous, crepitant throughout, congested, and cedematous. Several branches of the pulmonary artery, from the size of a crow-quill downwards, were distended with partially discoloured, more or less adherent coagula. The left lung was smaller than its fellow; its upper lobe was crepitant, but cedematous; its lower lobe contained but little air, and presented several small, encysted, cretaceous masses, and a few cicatrix-like patches of fibroid tissue connected with superficial depressions. The bronchial tubes of both lungs contained a good deal of secretion, but their mucous membrane was healthy, and their calibre normal. The mucous membrane of the larynx and trachea was congested, and a little excoriation was present at the posterior angle of each vocal cord. The pericardium contained at least half a pint of serum; the heart was large and firm, and weighed twenty-one three quarter ounces; the walls of the left ventricle were three quarters of an inch thick in the thickest part, and those of the right at least a quarter of an inch. All the valves appeared perfectly healthy, and the aortic were proved, by sustaining a column of water, to be competent. The ventricles and large arteries contained a considerable amount of fibrinous coagulum; the auricles were distended with black-currant-jelly-like clots. *Aorta*, healthy. *Abdomen*.—The peritoneal cavity contained half a pailful of serum. The liver was rather large and congested; spleen small, soft, and pale; pancreas healthy. In the centre of the posterior wall of the stomach was the cicatrix of a shallow ulcer. *Intestines*, healthy. The kidneys were of usual size, together weighing thirteen ounces and a quarter; their surface was smooth, and a little mottled; their cortex presented a good many thin-walled cysts, which were filled with thin, serous fluid, and of which the largest was the size of a marble. They were healthy in other respects. The suprarenal capsules were large, but natural in structure.

In this case, as in that of J. Bunting, there is a history of old bronchitis; but in the present instance the symptoms of pulmonary affection had lasted on and off for eleven years; moreover, pulmonary mischief of a chronic character was revealed post mortem. It cannot be denied, therefore, that pulmonary disease had probably preceded cardiac incompetence. There was, however, no emphysema or dilatation of tubes, and the condition of lung was neither sufficient to explain the patient's symptoms nor to account for the hypertrophy of the left side of the heart; there is no doubt, too, that latterly, at least, cardiac symptoms had predominated. I look upon the case, therefore, in its later stage as one essentially of cardiac incompetence. Yet, again, though the heart was hypertrophied, the valves seemed healthy. Although there was some albuminuria, and the kidneys were not perfectly normal, their condition was manifestly not one of the primary disease, but such only as constantly arises in the course of chronic heart or pulmonary affections.

On a Case of Aortic Aneurism in which a communication with the Pulmonary Artery was diagnosed during Life. By W. F. WADE, M.D., Senior-Physician to the Queen's Hospital, Birmingham, &c. ('Proc. of the Royal Med. and Chir. Soc.,' June 11th, 1861.)

Dr. Wade speaks of this case as the first in which the lesion in question had been diagnosed during life, Dr. Bennett not having deduced any diagnosis from a case of an analogous character, to which reference is made in the course of the paper. After the reading of the paper,

however, Dr. C. J. B. Williams said that "he had an opportunity of seeing Dr. Thurnam's original case in the Westminster Hospital, more than twenty years ago. The physical signs were well marked, sufficiently so to distinguish it from all cases of valvular disease. A long, grating, systolic murmur was heard, extending beyond the end of the systole, and continued even a little after the natural second sound. This implied something more than a systolic cardiac sound. Enduring beyond the second sound which marked the diastole, it could not be cardiac; it must be arterial, and proved that there was an opening from the artery into some other vessel—probably, as was most common, into the pulmonary artery. In this case the deviation of the sound upwards to the left of the sternum contributed to clear the diagnosis during life. This he had recorded at the time, and the observation had been subsequently published."

James S—, æt. 35, married, a railway porter, was admitted into Queen's Hospital, Birmingham, on May 5th, 1861. For four years he had suffered from piles, and for six months he had lost much blood from them, and from this he attributed the debility and wasting for which he sought assistance. Two weeks before admission he had to make a sudden and violent exertion, after which he felt faint for a little while, but thought no more of it. He never had any palpitation or cardiac difficulty; was affected with a little dyspnoea and slight cough, with watery expectoration.

Physical examination.—Cardiac dulness increased vertically. Apex seen and felt in the sixth intercostal space. Over the cartilage of the left fourth rib a loud murmur replaced both sounds, that with the second being of a hissing character, and so prolonged as to continue till the commencement of the next first sound. Usual second sound inaudible there. Marked thrill at this spot coincident with second murmur. First murmur a loud bruit de soufflet. Both murmurs heard in the carotids and over the upper chest. At the apex, a single murmur with first sound; normal second sound very distinct. No venous distension. Thrill in the carotids, pulsation of which was visible. Mucous râles in back of both lungs. Liver enlarged.

From this combination Dr. Wade concluded—1st, that blood escaped from either the aorta or pulmonary artery during their systole; 2nd, that it was probably from the aorta that the blood escaped; 3rd, that it did not regurgitate into either ventricle; 4th, that it regurgitated into one of the auricles or else into the pulmonary artery; 5th, that it did not regurgitate into the left auricle; 6th, that the opening was into the pulmonary artery, rather than into the right auricle; 7th, that the communication was probably due to aneurismal perforation of the aorta at or near its origin.

The patient stayed in the hospital for two or three weeks, and went back to work, declaring himself well. On the 14th of June he was seized with faintness and violent cardiac perturbation, which continued till the 28th, when he died. The post-mortem examination showed an aneurism of the size of a small hen's egg very near the root of the aorta, with a rounded, smooth, thickened opening into the pulmonary artery at its origin, and another, fissured, ragged, evidently recent one, into the right ventricle. The valves were all healthy. Dr.

Wade did not see the patient alive after leaving the hospital. During the fatal attack he came under the care of Dr. Pemberton.

This case, coupled with one by Professor Hughes Bennett (with which, however, Dr. Wade was not acquainted till after the death of his patient), seemed to establish the physical diagnosis of such lesions, which, the author said, was the more important since they were more common than other forms of varicose aneurism. But since the key to this diagnosis was the non-conduction of the second murmur to the heart's apex, we should be at a loss—1st, where aortic regurgitation existed; 2nd, where pulmonary regurgitation existed; 3rd, if varix produced no murmur with the second sound; 4th, where there was also an opening into either ventricle, or into the left auricle or its appendix. This last lesion was very rare, Dr. Sibson recording no case of it. Purring tremor, or thrill, was useful as a diagnostic of varicose aneurisms when it occurred away from the heart; but when in the cardiac region it was useless, or at least unreliable, because any amount of thrill was producible by simple valvular lesions. Yet if such a thing were suddenly developed it would have significance, even if confined to the region of the heart.

Sore Throat, its Nature, Varieties, and Treatment; including the use of the Laryngoscope as an aid to Diagnosis. By M. PROSSER JAMES, M.D., Senior Physician to the Metropolitan Dispensary, &c. (Post 8vo, London, Churchill, 1861, pp. 155.)

In his preface, Dr. James says that he does not set himself "to compile a systematic account of the diseases of the throat, but so to group and compare several disorders as to exhibit their mutual relationships, facilitate accurate diagnosis, promote right principles of pathology and treatment, give expression to some new ideas, evoke just criticism, and stimulate to fresh exertion in this fertile field." We fail to find anything very new or requiring sharp criticism, but we meet with a fair amount of correct information and common sense. A quotation about diagnosis, and four cases, showing the use of aconite in certain cases, will serve to introduce Dr. James to the notice of our readers.

"In all cases of sore throat," says our author, "inspection is to be had recourse to. It is often so carelessly done that nothing is gained by it. The tongue must be well pressed down and drawn rather forwards. A spoon—so often employed—is for nearly all purposes less useful than the finger. If the bowl be placed in the mouth it hides the fauces as effectually as the tongue itself, frequently more so, for many patients can display the throat very completely. If the handle be used, its sharp edges are apt to give pain. The common, pocket, tongue-depressors are very useful, but their shape is not well adapted for more than cursory examinations, and for these a paper-knife is usually handy. I have had a depressor made of a somewhat caudate shape, so as to expand over the base of the tongue and hold it firmly. A second blade is required, of a smaller size, for children. These screw into an ebony handle, and are thus portable. It will be found a very great aid to laryngoscopists and operators alike.

"Another instrument I have had constructed is a speculum of the ordinary glass kind, covered with caoutchouc, but oval instead of cylindrical, and of suitable sizes for the mouth. For inspection, it is preferable to anything. It holds down the tongue, and conducts the light to the point. In conjunction with this I have employed a condensing mirror to illuminate the throat; the reflector of the laryngoscope will answer the purpose.

"Such a speculum is very convenient for localizing topical applications, especially where timidity on the part of the patient renders this difficult. In order to use it without interrupting the sight, I have had several of my instruments bent at a right angle, and made more slender than usual. It is surprising, when the fingers get accustomed to them, how much assistance they give.

"The immortal Liston suggested placing a reflector (warmed) in the fauces. Such a one as dentists use is easily obtained. With this I tried to combine the use of my speculum, but without any great success. I understand that Mr. Avery some time ago had a reflector fixed on to a cylinder. My next step was to use a large concave mirror to throw light on a reflector at the back of the mouth, but this was inconvenient, and I did not think of perforating the mirror till I saw the ophthalmoscope in use. Before I completed my design Professor Czermak solved the problem, satisfied the Germans and French, and brought his laryngoscope to this country. His adaptation is very complete, and will suit most people. His reflectors do not magnify—mine did. Perhaps, on the whole, it is best to see the parts of their natural size, though I like to magnify in some cases. In the practice of laryngoscopy we place in the throat a small reflector, previously warmed, to prevent its condensing the breath. Light, either natural or artificial, must be directed upon this reflector, by means of a concave mirror, through an aperture in which the observer looks.

"A good deal of tact is needed. The beginner may merely see the base of the tongue and epiglottis, or, turning the face of the reflector upwards, the posterior surface of the velum, &c. Proceeding carefully and patiently, he will soon be able to obtain a view of the pharynx, and at length behold the interior of the larynx itself.

"It is not to be supposed that the mere possession of the laryngoscope will enable any one to read off morbid changes. The needful tact has to be acquired. Patience is necessary to success, and this ought not to frighten any one, for it is equally true of the microscope and ophthalmoscope. Physiologically, it is intensely interesting. The state of the parts in health must first become familiar. Then we may go on to observe changes in disease. At present the subject is in its infancy, but we may hope it will rapidly grow."

Dr. James is strongly in favour of aconite in certain cases, and the cases, which we take from the appendix, will show that he has some reason for his preference.

CASE 1.—*Inflamed sore throat during an epidemic of scarlatina, cured by aconite.*—A healthy lad, æt. 13, was attacked on Monday with sore throat and general drooping. I saw him on the Wednesday following, when

the whole fauces were of a vivid-red colour, and the tonsils large and tender. The skin was hot and dry; he was very thirsty; his urine scanty and high-coloured. There was sleeplessness, and some little dry cough. Tongue and physiognomy looked suspicious, and he had been exposed to the contagion of scarlatina. Half a drop of the Tinct. Aconiti every four hours. This was continued for five days, though at the latter period it was less frequently repeated. He was then discharged cured, having had no rash or further symptoms.

CASE 2.—*Inflamed sore throat, cured by aconite.*—A woman of slender frame, æt. 31, presented herself on Monday at the Metropolitan Dispensary complaining of a sore throat. She had previously been under my care for dyspepsia. The fauces were intensely congested; deglutition was very painful; there was constant hawking and slight cough, with smart pyrexia. One drop of tincture of aconite, in one ounce of water, every four hours. The following Thursday she was greatly improved. Skin no longer hot and dry. Pulse had lost its hardness, and was diminished in frequency. The soreness in the throat was nearly gone, and the congestion had disappeared. Continue the medicine two or three times a day. After three days she was discharged cured.

CASE 3.—*Inflamed sore throat, cured by aconite, which produced its peculiar sensations.*—A professional gentleman, after exposure to cold and wet, was seized with shivering, followed by pyrexia and sore throat. On the second day his throat was very painful, fiery red, and considerably swollen. His voice was reduced to a little above a whisper. Tenderness on pressing the thyroid cartilage. Hot and dry skin, thirst, scanty and highly coloured urine. Pulse 100, full. Ten grains of sugar, with two drops of aconite tincture, to be dissolved in the mouth every three hours. Eight doses have been taken. He now complains bitterly of tingling all over him. It began in the fingers and toes, and extended to the trunk. It is a feeling "similar to the taste of the powders in the throat." The congestion is entirely gone. The voice much better, but still there is hoarseness. Pulse 80, small, compressible. Omit the medicine. The next day he considered himself cured.

CASE 4.—*Inflamed sore throat, cured by aconite; power of the drug.*—A young man, æt. 20, in good health, caught a cold. After rigor, he had intense soreness of the throat. Pressure was painful. Great hoarseness. Injection and swelling of the fauces. Pulse 95, full and hard. Skin hot and dry, with thirst. Three drops of aconite tincture, mixed with sugar, placed on the tongue and slowly swallowed. Numbness of the throat soon supervened, and a sensation of tingling lasted four hours. At the end of this time the pulse had lost its fulness, become soft, and only numbered 75. The intense injection had given way, and the velum had lost much of its contractility, the uvula lying on the tongue and provoking a constant desire to swallow, and occasionally a suffocating cough. It regained its tone by the next day, and all signs of the sore throat were gone, as well as the effects of the medicine.

Constipated Bowels: the various Causes and the rational Means of Cure.
By S. B. BIRCH, M.D. (Post 8vo, London, Churchill, 1861, pp. 191.)

Dr. Birch does not address himself primarily to members of the medical profession. "It," says he, "some patients, or their medical attendants, even but in few instances, reap benefit, then this little brochure (imperfect as it is) may fairly claim the possession of a little

sphere of usefulness." With this view he writes, sensibly enough, of constipation as resulting from—

1. The abuse of aperients.
2. Indolent habits, luxury, too much sleep, confinement in hot, relaxing, ill-ventilated apartments, morbid fear of draughts, &c.
3. Torpid liver and deficiency or perversion of biliary secretion.
4. Neglect of proper periods for evacuating the bowels, especially when nature impels.
5. Pure nervousness, excessive anxiety regarding frequency and regularity of the alvine evacuations.
6. Want of contractile power, atony of the nerves and the muscular coat of the intestinal canal, irregular peristaltic action, flatulent distension.
7. Deficient secretion of moisture in the lower bowel, owing to which hardened, scybalous masses, or else numerous little bullet-like formations, are apt to lodge in the colon or rectum.
8. Constipation from causes mechanical, and of limited location, *e.g.* hæmorrhoidal affections, pregnaney, and muscular weakness or pain (rheumatic or otherwise) located in the abdominal parietes, loins, diaphragm, &c.
9. Special conditions connected with infancy, old age, and cerebro-spinal paralysis.

In the course of these remarks a new remedy is alluded to, which we must not omit to notice.

"In suggesting treatment for *protracted* and *unusually obstinate* constipation from this special cause, viz., *hepatic and biliary derangement*, I must not," says our author, "omit one powerful yet pleasant and safe remedy, with which I have for some years identified myself beyond any other member of our profession, and in behalf of which my paper read in July, 1859, at the annual meeting of the British Medical Association at Liverpool, may be remembered. The natural reluctance of our profession to take up novel remedies in too great a hurry has, as yet, prevented the study and establishment of the therapeutic agent in question in general practice, but it may be safely affirmed that, when the subject is taken up *warmly and actively* by the majority of my professional brethren, its value will be unappreciated only by the few who may be wilfully blind.

"I refer to oxygen gas, which, under proper exhibition, I have often found to produce an almost immediate effect in constipation depending upon torpid and congested liver, with chronic derangement of the biliary secretion.

"My advocacy of oxygen as a valuable curative agent has always been carefully limited to its use in intractable or otherwise incurable diseases. To illustrate this special suggestion in the treatment of constipation, it will be merely necessary to say that, excluding many instances of more gradual yet almost satisfactory results, it has been my good fortune to administer this remedy *in a few cases* where every other treatment had failed to afford more than the most transitory benefit to the hepatic functions under long-continued derangement. One of these patients was almost *in articulo mortis*; three others had become so offensive from impurities, cutaneous eruptions, and tainted breath, as to be hardly approachable with-

out disagreeable impresson upon the olfactorics. In each the effects of the oxygen within a few days were most marked. There could be no mistake between the *post hoc* and the *propter hoc*. In one case after a single dose, in the others after from three to eight doses, sudden diarrhœa of the most offensive character supervened without the aid of any other medicine, and these evacuations were surcharged with a large quantity of offensive (first black, then greenish-black) inspissated bile and mucus, which had evidently been pent up within the biliary ducts and cells, causing extreme depression, and the discharge of which at once relieved that lowered condition.

"In the cure of constipation, I do not claim for oxygen more than a very circumscribed position of value; but since hepatic torpidity may be not only a cause *per se*, but may be a complication insidiously co-operating with other and more tangible causes, it behoves us not to lose sight of this remedy, when such complication can be clearly traced as an agency which inhibits the attainment of full effect from our other rational therapeutic measures."

On Urine, Urinary Deposits, and Calculi; their Microscopical and Chemical Examination, including the Chemical and Microscopical Apparatus required, and Tables for the practical examination of the Urine in health and disease; the Anatomy and Physiology of the Kidney, with upwards of sixty original analyses of the Urine in disease, and General Remarks on the treatment of certain Urinary Diseases. Illustrated with numerous original engravings. By LIONEL S. BEALE, M.D., F.R.S., Fellow of the Royal College of Physicians, Physician to King's College Hospital, &c. (Post 8vo, London, Churchill, 1861, pp. 433.)

This compact volume is a reprint, with additions, of lectures delivered in the author's laboratory for the study of those branches of chemistry and microscopical inquiry which have a special bearing upon medicine, and originally published in one of the weekly medical journals. What these lectures profess to show is set forth in the long title, and what they profess they do not fail to perform in a very efficient manner. All who have worked with Dr. Beale in his laboratory will be glad to have this memento of hours so well spent; and all who have not so worked may welcome a volume which is full of valuable practical information.

Lectures on the Diseases of the Kidney generally known as "Bright's Disease," and Dropsy. By S. J. GOODFELLOW, M.D., Fellow of the Royal College of Physicians, Physician to the Middlesex Hospital, &c. (Post 8vo, London, Hardwicke, 1861, pp. 306.)

These lectures are reprinted from the pages of the 'Medical Times and Gazette.' Written in a philosophical spirit, they are also well calculated to convey a clear and correct picture of the important diseases of which they treat. In many places, too, they show that

their author is disposed to think for himself, as witness what is said about the process of urinary secretion. The view which Dr. Goodfellow takes is somewhat opposed to that of Mr. Bowman. Speaking of the latter view, he says—

“There are so many difficulties opposed to the theory which Mr. Bowman promulgated, from a careful study of the anatomy of the kidney, as revealed by his extensive, patient, and admirably-conducted investigations, and which was almost universally accepted as true by physiologists, and has ever since been taught in the schools. Many of those, however, who even teach this theory in their lectures are not exactly satisfied with it, and yet are not prepared to state definitely in what they dissent from it. I must confess that I have not been able to give my faith to it for some time past. There are so many difficulties in explaining many conditions under this theory, that I have been led to conclude that, ingenious as it is, and true undoubtedly in many respects, yet that it does not comprise the whole truth. Accordingly, to this theory, then, it would appear that the retardation of the circulation, and consequent increase of pressure, which the peculiar arrangement of the Malpighian vessels is so eminently calculated to produce, lead to the separation ‘of the fluid portion of the urine’ by a process of filtration, while the solid matter, composed of various organic constituents and inorganic salts, is separated by the aid of the glandular epithelium which lines the convoluted portion of the tubes.* The water is supposed to come from the blood in the Malpighian vessels by a process of filtration, and the organic constituents and the inorganic salts from the blood in the capillary network surrounding the convoluted tubes, by a true secretion, through the epithelium lining the tube. Now, in examining closely this theory, we must conclude that the blood, in passing through the Malpighian capillaries, where the circulation is most retarded, and where the greatest lateral pressure must necessarily be exerted upon their walls, only parts with the water; while the network of capillaries which receives the blood from the small efferent vessel, where the lateral pressure must be very much less, permits the transudation through their walls of ordinary blood-plasma, together with the ‘organic constituents’ and the ‘inorganic salts’ of the ‘secretion,’ in order that the ‘true secreting elements’ should separate the latter. In order to accept this as true, the capillaries into which the efferent vessel breaks up (the Malpighian capillaries) must have much thicker walls than the capillaries which surround the tubes, and which are formed by the efferent vessel. This difference (if there be any) I have certainly never been able to discover.

“But is it probable that a contrivance, so admirably adapted as is the Malpighian tuft for delaying the blood-currents, should have for its sole office that of a filter, and that it should separate in part merely the menstruum which holds the more important substances in solution? I do not undervalue this function, even if it be the only function of this elaborate arrangement. There is no doubt that the mere separation of water, or, rather, that a contrivance suitable for the separation of large quantities of water under certain states, is indispensable to the economy.

* ‘Physiological Anatomy and Physiology of Man. B R. B. Todd, M.D., and Wm. Bowman.

It is essentially necessary, in order that the blood may, within certain ranges, be preserved at a uniform density, even under circumstances calculated suddenly to increase the amount of water in it from ingestion or other causes.

"Next, to supply the blood-plasma for so much solid, highly animalised, and saline matters as pass off by the kidneys daily, there must be some arrangement eminently calculated to retard circulation and to favour transudation. What do we find in the anatomical arrangement as described by Mr. Bowman? A small vessel suddenly breaking up into a rounded bunch of capillaries, having 'a far greater aggregate capacity than itself, and from which there is but one narrow exit,'* the efferent vessel, which also breaks up into a network of capillaries, which surrounds the convoluted channels or tubules. It is impossible to conceive a more admirable contrivance for retarding the blood-current; and the efferent vessel being so small, and the capillaries into which it breaks up being of smaller diameter than those of the Malpighian bodies, 'it follows, from the law of hydraulics, that there must be a greater pressure against the walls of the latter.'† And yet, according to current notions, the capillaries of the small efferent vessel, with this small amount of pressure, are the only vessels from which the transudation of the *liquor sanguinis* takes place, not only for the nutrition and repair of the tissues but also for the separation daily of upwards of one thousand grains of solid constituents of the urine. Moreover, is it probable that the same blood-plasma should at the same time, and in the same part, be the fluid containing the urinary excrements for elimination and the nutriment matters for nutrition? Two processes, then, quite incompatible with each other, and opposite in their action, are going on with the same fluid in the same parts of the kidney and at the same moment.

"Again, the water descending the convoluted tubules or channels, and in contact with and bathing the free surface of the epithelial cells, is calculated to produce an osmotic current in those cells, the very opposite of that necessary for secretion. The current must necessarily be continuous from the free surface towards the attached surface, and, therefore, towards the blood-plasma in the tissues instead of in the opposite direction. If secretion, therefore, is due in any way to the laws of osmosis, it must be brought to a stand-still. So, also, if there be a considerable escape of blood-plasma from the Malpighian capillaries, the density and chemical composition of that within the tubes and that in the tissues being the same, endosmotic action must cease.

"But to this it may be said, and very properly, that the nervous force (supposing it to act as the galvanic current is known to do) may make the endosmotic action go on with considerable activity, even under these circumstances. Believing, as I do, in the influence of the nervous force, I am quite willing to give the weight which belongs to this hypothetical answer to my objection.

"But the next objection which occurs to me is a much more serious one. Professor Graham and C. Schmidt have proved that urea possesses great diffusive power in water. It is equal to that of common salt. In solutions containing 20 parts in 100 of water, the quantity of the saline

* 'Philosophical Transactions,' 1842.

† Ludwig, 'Handwörterb. d. Physiol.,' as quoted in Lehmann.

solution diffused was 58·68; that of urea was the same; while the solution of albumen was only 3·08.

"You are aware that it has been discovered by Professor Graham, that the law of diffusion of gases is also applicable to different neutral salts and other substances dissolved in water. That law is, 'that the tendency to diffusion diminishes with the increase of density, being inversely proportional to the square root of the density.' It has also been made evident by Schmidt, that generally, when different substances are added to water, the volume of the two combined is smaller than that of the two separately; that, in fact, a certain amount of condensation takes place. Now, there seems to be a law also of condensation. It is, that in proportion to the diffusive tendency of any substance, so is the co-efficient of its condensation.

"But urea is a remarkable exception to this; for while its diffusive power is 58·68, its co-efficient of condensation is only 0·160, and that of common salt is 1·505. Its co-efficient of condensation, as found by Schmidt, is the lowest of any substance that has been submitted to experiment.

"It is highly improbable, therefore—it is almost impossible—that (to say the least) two substances, having such diffusibility through water should be separated from it by mere filtration, especially such a substance as urea, that admits of no, or but little, condensation with any fluid with which it is mixed. The tendency of such a substance would always be to escape through the pervious walls of a vessel. This I regard as the most serious objection to Mr. Bowman's theory, although I think that the others also are entitled to considerable weight. Now, albumen is the very opposite to urea in respect to diffusibility and condensation. Its diffusibility is remarkably low, being only 3·08 in a solution containing 20 parts to 100 of water,* while that of urea is 58·68; and its co-efficient of condensation is 0·420,† while that of urea, as I have before said, is only 0·160. Albumen, then, from this condition alone, and independently of other agencies, has a strong tendency to remain within the vessels, and but little tendency to pass through their coats with the water, urea, and salts.

"My own idea is (and I mention it with great diffidence, for my subject is not physiology), that, under the combined influence of pressure, quality of blood, and the nervous force, the urinary constituents are separated directly from the Malpighian capillaries, and that whatever constituents of the serum or of the blood are normally transuded through their walls, are *absorbed* by the epithelial cells of the tubules or by some other agents before the convoluted tubes become continuous with the straight or simply excreting ducts; and that the blood, purged and depurated, which leaves by the efferent vessel, while passing through the network of capillaries in the tissues of the kidney, parts with the normal plasma for the usual nutrient processes, as in other organs.‡

* Golding Bird's 'Natural Physiology,' by Brooke.

† Lehmann's 'Physiological Chemistry,' translated by Dr. Day for the Cavendish Society.

‡ Ludwig some years ago propounded a somewhat similar notion—hypothesis—on one ground alone, namely, what may be called the hydraulic theory, or that of pressure.

"It is the common practice to speak of these tubules or channels as mere excretory conduits. This leads to very erroneous notions of their true office. It is probable that the separation of the urinary constituents from those of the serum that may be transuded with them actually takes place in these tubules, and that it occupies some length of time before the urinary constituents, transuded from the Malpighian capillaries, find their way into the straight ducts. These channels are of extreme length and highly convoluted. I am disposed to regard them more as like the blind tubules of the stomach and other mucous membranes, than as excretory passages, with this difference, that instead of terminating in blind extremities, they communicate with the straight, purely excretory tubes by an open orifice. Not only is a separation of the constituents of the urine probably effected in them, but those matters which are required for the system, and which cannot be lost without detriment, are reabsorbed, just in the same manner that the constituents of the gastric juice, after they have performed their office, are reabsorbed in the lower portions of the intestinal canal for future use; for none of these constituents are normally found in the fæces. We have an analogy for this manner of secretion in some, at least, of the secretions, *e.g.* the gastric and biliary."

We leave this quotation to speak for itself, merely adding that Dr. Goodfellow's work is intended chiefly and particularly as a contribution to the stores of practical medicine, and that it is what it intends to be.

On the Phenomena of Diabetes Mellitus. By the Rev. SAMUEL HAUGHTON, Fellow of Trinity College, Dublin. ('Dublin Quart. Journ. of Medical Science,' May, 1861, and Nov. 1861.)

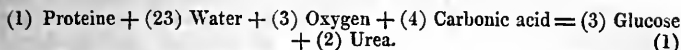
A theory is propounded in this paper, which, if we mistake not, will explain away two important difficulties in the physiology of diabetes—the excessive secretion of urea in all cases, and the presence of sugar in the urine, when all starch food is carefully excluded. In saccharine diabetes the appetite is voracious, and the amount of food taken may be twice or thrice that which would satisfy an ordinary appetite, and yet there is notoriously no *work done*, no vital action of any kind, to dispose of this food in the proper manner, for the mind is sluggish and inactive, and the body incapable of exertion. How then are we to account for the excess of urea in the urine? Mr. Haughton has an answer which appears to be very satisfactory, and which explains at one and the same time, why it is that this excess of urea is accompanied by an excess of sugar, and why sugar should be present when starch food is carefully excluded. The answer is this—that the decomposition of unassimilated proteinic substances may result in the formation of urea and glucose. Thus.

"Assuming the following compositions for proteine, glucose, and urea;

This was evidently insufficient. I shall endeavour to support it partly by this, but, as you might be prepared to expect from my last lecture, principally upon other grounds.

Proteine..	...	$C_{36} H_{27} N_4 O_{12}$	393	atomic weight.
Glucose	$C_{12} H_{14} O_{14}$	198	..	
Urea	$C_2 H_4 N_2 O_2$	60	..	

"The following relation is evident :



"The preceding relation shows the possibility, at least, of proteinic compounds, by the addition of small quantities of water, oxygen, and carbonic acid (which all exist in abundance in the blood), becoming converted into glucose and urea; and by examining the atomic weights, it will be seen that such a reaction would produce very nearly five grains of glucose for every grain of urea."

Mr. Haughton bases his reasoning upon his former investigations upon the "*Natural constants of the Healthy Urine of Man*" ('Abstract,' XXXII, p. 126) upon some additional experiments on food, and upon three cases of diabetes under the care of Dr. Stokes in the Meath Hospital, the particulars of which are given at full in the present paper. The *constants* of these cases are given in the following table, with reference to which it is only necessary to add that *the quantity of urea and sugar ingested per day* is found from certain calculations (also given in the paper) which are based on the quantity and composition of the food taken, and which show very accurately the urea equivalents and the sugar equivalents of the food taken.

TABLE XII.—*Constants of Diabetes Mellitus.*

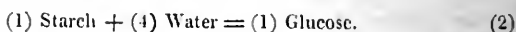
Case.	Weight.	Urea excreted per day.	Sugar excreted per day.	Urea ingested per day.	Sugar ingested per day.
	lbs.	grs.	grs.	grs.	grs.
1. Owen Murphy. (Mean of nine observations.)	93.56	1182	9773	1349	9321
2. Henry M'Nee. (Mean of four observations.)	152.5	991	7526	1224	4807
3. — Keogh. (Single observation.)	129.	750	4708	—	—

Let us suppose, then, with Mr. Haughton, that the decomposition of unassimilated proteine may result in the formation of urea and glucose, and that no mental or mechanical work is done by the diabetic patient, and that the natural excretion of urea is two grains per pound of body weight, and we find the distribution of urea and sugar in these cases which is given in this table :

TABLE XIII.—*Distribution of Urea and Glucose excreted in Diabetes Mellitus.*

Case.	Urea due to <i>opus vitale</i> .	Urea due to decomposition of proteinic compound.	Sugar due to decomposition of proteinic compounds.	Sugar due to starch food.
1. Murphy ...	188 grs.	994 grs.	4970 grs.	4803 grs.
2. M'Nee.....	305 „	686 „	3430 „	4096 „
3. Keogh.....	258 „	492 „	2160 „	2248 „

“The sugar excreted,” says Mr. Haughton, “given in the last column, and not accounted for by the decomposition of proteinic compounds, was undoubtedly formed directly from the starch contained in the food, by the following well-known reaction :



“The sugar discharged appears from Table XIII, in the three cases, to be divisible into two nearly equal portions ; one of which is probably formed directly from the starch of the food, and the other probably from the decomposition of proteinic tissues into glucose and urea—a destructive process, which requires the system to be renovated by large quantities of nitrogenous food.

“In the case of Murphy, I know that no other food was taken than that already specified, and I therefore have no hesitation in giving the following calculation, based, in his case, on the sugar ingested and sugar excreted :

“On the average, the food ingested was capable of producing 9321 grs. of glucose per day ; and did actually produce 9773 grs. For my present purpose, I shall consider these quantities as practically equal ; but they are not to each other in the relation of cause and effect, for the sugar excreted is divisible into two portions :

1. Sugar resulting directly from starch food	4803 grs.
2. Sugar resulting from decomposition of proteinic compounds	4970 „
Total	9773 „

“The difference between 4803 grs. and the total sugar-equivalent ingested, 9321 grs., was not employed in the manufacture of urea or of glucose ; therefore, theoretically it must have gone to produce carbonic acid and water ; for, since the fecal excretions in Murphy's case were reduced to a minimum, and his skin did not act at all, the whole excretions of the body, viz., urea, glucose, carbonic acid, and water, consisted of the four substances just named. If the theory, therefore, of no work being done in diabetes mellitus, and of the decomposition of proteine, be correct, we should expect to find the starch, or sugar, repre-

sented by the difference between the ingested and excreted sugar formed directly, sufficient to produce the amount of carbonic acid that should be excreted as a minimum.

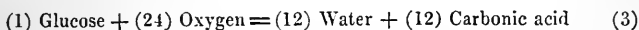
"In the 'Philosophical Transactions' for 1859, pp. 686 and 693, Dr. Edward Smith gives as the result of his accurate and original observations on four persons, whose average weight was 160 lbs., in a state of quietude, the quantity of carbonic acid excreted by the lungs per day as 26.193 oz. av.; this result, which I believe to be the most accurate hitherto determined, would give 71.622 grs. of carbonic acid, per pound of body-weight, per day.

"Applying the preceding to Murphy's case, since his weight was 93.58 lbs., we find the carbonic acid to be excreted in a state of quietude to be 6701 grs. To compare this with the result due to the oxidation of the glucose, we have—

Sugar-equivalent ingested not excreted as such =

Difference between total sugar ingested	9321 grs.
and sugar directly formed from starch-food	4803 "
<hr/>	
= 4518 "	

"This glucose would be converted into water and carbonic acid, by the addition of oxygen, as in the state of health, by the following reaction:



"By referring to the atomic weights of these compounds, it will be seen that glucose produces carbonic acid in the proportion of 198 to 264, which is exactly 3 : 4. Hence, the 4518 grs. of glucose (or of starch food equivalent to glucose) remaining in the blood, will be converted into 6024 grs. of carbonic acid, and discharged by the lungs.

"This result is too close to that already found from Dr. Smith's experiments to be attributed to any chance, and leads to the following view of Murphy's case, which explains all the facts observed:

"1. There was an excretion of urea, due to the minimum condition of quietude of body and mind.

"2. There was an additional excretion of urea, caused by disease, and having its origin in a perverted decomposition of nitrogenous tissues.

"3. This additional excretion of urea was necessarily accompanied by an excretion of glucose, amounting to about half the total excretion of that substance.

"4. The remaining half of the sugar excreted owed its origin to the direct change of the starch food into glucose, which was excreted as such.

"5. Of the starch food ingested, about half was consumed, as just stated, in the diseased production of glucose; the remaining half was excreted as carbonic acid and water, as in health.

"6. The carbonic acid thus formed was somewhat less in amount than that usual in health, in a state of quietude of mind and body."

The theory which Mr. Haughton proposes assigns a double origin the glucose excreted, part being due to the starch food and part to the decomposition of proteine—these two origins giving about an equal weight of sugar. The current theory assumes the sugar to be

formed exclusively from starch food. In comparing the two theories Mr. Haughton speaks as follows:

"The last theory fails in two ways; it does not account for the presence of excreted sugar, when all starch food is carefully excluded; and it fails completely to explain the large excretion of urea, which, on this theory, ought to be accompanied by an amount of work done that is nowhere discoverable.

"The first theory explains the presence of sugar in the excretions on almost any description of food; and also gives a rational explanation of the large excretion of urea, by attributing it to a decomposition, not attended by the development of work done.

"On both theories, a large proportion of the food consumed is wasted in the production of sugar. In the first theory this waste of food occurs in the conversion of starch into glucose, which is excreted as such, without giving out work; in the second theory a similar waste occurs in the spontaneous decomposition of proteine into glucose and urea, which is supposed not to be attended with the giving out of work; but the essential difference between the two theories is, that, while they both offer an explanation of the excretion of glucose, the first theory fails to explain the corresponding and equally remarkable excretion of urea, a phenomenon which is satisfactorily accounted for by the second theory.

"The account given by Prout of the physiology of diabetes is, although very vague, in accordance with the theory I have here laid down. Thus, he admits that some of the starch food is excreted as sugar, and some assimilated, and that a similar statement applies to the gelatinous, albuminous, and even the oleaginous aliments—a statement so large as to embrace almost any theory of the origin of the excreted sugar. He makes also a similar statement with regard to the tissues, and also attributes to the kidneys the function of completing the formation of the sugar:

"When *organized* saccharine principles, as farinaceous matters, &c., are taken into the diabetic stomach, they are, in the first place, reduced to the form of *low* sugar; part of which low sugar is assimilated as in the healthy stomach, while another part is modified, or remains unassimilated. The portion that is assimilated is applied to the purposes of the economy; the portions modified and unassimilated pass together through the system to the kidneys, by which glands the portion modified is disorganized, and finally appears in the urine as crystallizable sugar, along with the portion originally remaining unassimilated in the stomach. The same remarks are applicable to gelatinous, and, in extreme cases, perhaps, to albuminous and oleaginous aliments. The *secondary* assimilating processes in diabetic individuals participate in the derangements of the primary processes just detailed; that is to say, the gelatinous tissues are either reduced to sugar, and thus not assimilated at all, or they are imperfectly assimilated, or they are mal-assimilated; in all which conditions the saccharine principle derived from the gelatinous and other tissues may be supposed to pass through the system to the kidneys; by which organs, like similar matters brought from the stomach, the various modifications of the saccharine principle are further disorganized, and converted into crystallisable sugar."

"In another passage, Dr. Prout endeavours to account for the occur-

rence of lactic acid, at least occasionally, in diabetic urine ; a fact which he seems to have himself noticed :

“When, in diabetic individuals, the disorganizing function of the kidneys is suspended, or when these glands are partially diseased, the urine, besides albuminous matters and more or less of crystallizable sugar, often contains the saccharine principle *in imperfectly developed forms*. Hence such urine, almost without perceptibly becoming vinous, passes at once into the lactic or acetous fermentation, and acquires, from the quantity of lactic and acetic acids developed, the strong acid smell of sour milk.”

“In conclusion, I would observe, that the well-known fact, that pulmonary tubercular disease generally accompanies the closing stage of diabetes, is well worthy of more attention than has been hitherto bestowed upon it. It is strange that some theorists should attribute phthisis to excessive oxidation, and others to deficient oxidation. Now, there can be no doubt, whatever theory of diabetes be adopted, that the excretion of glucose in large quantities, a highly valuable and unoxidised compound, indicates a deficient oxidation of the tissues. This deficient oxidation coexists in diabetes with the early stages of tubercular disease, which latter must therefore be regarded rather as a disease accompanying defective oxidation of the blood than one resulting from excessive action of oxygen.

A Manual of the Diseases of India. By W. J. MOORE, Esq., H.M. Indian Medical Establishment ; in Medical Charge of the Sanatorium for European Troops on Mount Aboo, &c. (12mo, London, Churchill, 1861, pp. 220.)

We were prepossessed in its favour by the diminutive dimensions of this volume, and this prepossession was not destroyed after turning over its pages and testing the quality of its contents. We are, indeed, surprised to find so much really good matter in so small a space.

Mr. Moore's object is a modest one. He does not offer this small book as a substitute for the larger volumes of other writers. He merely intends it as an introduction to the study of these volumes, which may prove of use especially to the European and native hospital assistants in the different medical establishments in India, and as a remembrancer by which much of the information contained in these larger volumes may be retained and carried about by the medical officer when he is obliged to economise space in the cabin, the tent, or the bullock-trunk.

Mr. Moore lays great stress upon the asthenic tendency in Indian diseases, but he is not disposed to condemn practices of treatment founded upon a contrary notion. Take what he says about blood-letting as an example :

“From the earliest ages down to the present time the propriety or otherwise of bloodletting has been the subject of most unsatisfactory and conflicting conclusions. For instance, Pythagoras (B.C. 580) disapproved of bleeding, and Hippocrates (B.C. 420) speaks of having practised it successfully on his patient Anaxion for pleurisy. The disciples

of the latter teacher, Dioeles and Proxagoras (B.C. 340), also used venesection; while Chrysippus and Cleophantes denounced the practice. Celsus (A.D. 10) bled children, old men, and pregnant women; while Galen (A.D. 131) takes the precaution to give a list of diseases in which venesection should never be employed.

"In later times we have Sydenham stating, 'Primum in curatione phlebotomise attribuo;' and the author of 'Medicina Vindicata' (A.D. 1725), and Henry Stubbe, M.D., defending the practice against the attacks of one G. Thomson, who most sagaciously writes, 'They should never attempt—yea, rather abhor—to enervate in the least by the lancet the strength, with its correlative blood and spirits, without which there is no hope of cure.'

"Thus it is very evident that the doubt as to the propriety of blood-letting did not originate with the present generation, although, indeed, the credit (if it can be so designated) of bringing forward the ingenious theory, that a change in the type of disease has brought about the present decided inclination to a non-depletory practice, attaches to men of the present day.

"An attentive perusal, however, of the detailed cases in Ammesley's large work, and in the older records of Indian practice, and a comparison of such cases with those occurring at the present period, does not bear out the theory of a changed type of disease, as it occurs in this country, such as Drs. Alison, Christison, and their supporters, would have us believe.

"Neither do I consider any such apology necessary to justify the present non-bleeding system—a revolution of practice not depending, as I believe, on any change in the characteristics of disease, or deterioration of *physique*, but on a juster appreciation of the province of the medical practitioner, of the curative powers of nature, and of the importance of husbanding a patient's strength, instead of allowing it to issue from the punctured orifice of the median cephalic or basilic vein.

"Bloodletting, either general or local, is one of the most powerful agents we possess, and, in India, is occasionally essential for the cure of disease occurring in constitutions where the cachectic taint is not marked. It is in such cases, as Robert Jackson stated, 'the main engine of successful practice;' but in most conditions it can only be regarded as an auxiliary, and only to be used after mature consideration of the symptoms presented; and often such scrutiny will determine the measure as inadmissible.

"From these remarks, however, I do not wish to be understood as belonging to the class of practitioners who, under the mistaken idea that the red particles, being reduced beyond a certain amount, cannot be replaced, never have recourse to depletion. On the contrary, my memory is stored with numerous instances of pneumonic, pleuritic, and other inflammatory affections occurring during my initiative in a large country practice at home, where the efficacy of the lancet was so clearly demonstrated that I have ever since, in a certain class of cases, held an opinion with regard to bleeding little inferior to the conviction previously quoted, as expressed by Robert Jackson.

"Moreover, I could also refer to numerous instances in the writings of both ancient and modern authors of immense losses of blood having

occurred without any permanent ill effect. Cases of this kind are on record by Schenck, by Brassavolus, by Marcellus Donatus, by Riolan, by Ashton, and must be familiar to every operating surgeon; and, also, I can point out numerous individuals who have been bled 'at the rise and fall of the year,' during the best half of their lives, and who now, in their declining age, are hale and hearty. Although, of course, not recommending this Sangradism formerly so prevalent in the country districts of England, still the fact may be mentioned as indisputably proving that, in certain constitutions, bloodletting, even when copious and repeated, leaves no permanent ill effect.

"With every desire to husband the strength, and with the knowledge that most diseases have an asthenic tendency, cases of acute disease will occur, and progress so rapidly in vigorous and asthenic constitutions, both in this country and at home, that bleeding, by its quick and effectual relief of congestion, is the only path to convalescence. This, however, can only be required in Indian practice in the inflammatory diseases of robust, well oxygenated, or newly arrived Europeans, and these form a very small proportion of the cases which come under the care of the generality of Indian practitioners. Hence, the latter may be long strangers to the lancet; but it must be ever borne in mind, that this instrument may, at any time, be required to relieve that congestion which, otherwise, would terminate in deep-seated and deadly suppuration. It must, however, be urgently represented, that there is no remedy requiring more discrimination in its application; and although so desirable in the class of cases I have pointed out, it is as positively contra-indicated for the long resident, the debilitated, the anæmic, and exhausted.

"Between the extremes of debility and vigour there are certainly conditions sufficiently perplexing to render the question of the advisability of bloodletting one of extreme difficulty. In by far the most cases, avoiding general, we must be content with local depletion; and, in very many others, we are obliged to trust to other means in our management of disease as it exists in India.

"Clutterbuck felt this difficulty so strongly, that he not very logically comes to the conclusion that bleeding is useful when it is useful, and hurtful when it is hurtful. Somewhat like a certain Justice Shallow, who, in his summing up in a doubtful case, consoled himself by remarking, 'If I'm right, I'm right; and if I'm wrong, I'm wrong!'

"We have now, however, reached a period of increased knowledge in the art of diagnosis; every day adds to our acquaintance with the true causes of disease; routine is now no longer allowed triumphant sway; and the scientific physician will use, but not abuse, the powerful agent under consideration; erring, indeed, in cases susceptible of grave doubts, on the non-depleting system, and scarcely admitting, with reference to the lancet, the truth of the old adage, *in medio tutissimus*."

The classification adopted by Mr. Moore is open to some criticism, but this is not a matter of vital moment, seeing that it does not affect prejudicially the descriptions of the individual diseases.

On Destitute Incurables in Workhouses. By Miss ELLIOT and Miss CONNE. (Pamphlet, London, Nisbet & Co., pp. 16.)

This pamphlet, which is, in fact, a paper read at the Social Science Meeting at Glasgow in September, 1860, suggests, as it seems to us, a very simple and effectual plan by which a very grave evil may be remedied. The authors hold this principle—that if we force destitute incurables into workhouses for want of asylums such as the Royal Hospital at Putney, or Sir John Gladstone's small hospital at Leith, or Mrs. Elizabeth Keir's in Edinburgh, we are bound to treat them there, not as **PAUPERS**, but as **PATIENTS**; and their plan is this:

“(1) *That in every workhouse persons suffering from acute and distressing diseases, such as dropsy, consumption, or cancer, should be placed in wards especially allotted to them, to be called the wards for male and female incurables.*

“(2) *That in these particular wards, private charity be permitted to introduce whatever may tend to alleviate the sufferings of the inmates.*

“The granting of these two articles,” say our authors, “seems all that is necessary to produce a change of a most blessed kind in these abodes of suffering. Were it known that there were such sufferers in each workhouse in wards open to the charity of the benevolent, it would hardly happen but that in each union persons would be found glad to undertake the task of raising and expending subscriptions to procure the needful comforts.

“These wards, where no ‘encouragement of pauperism’ can possibly be dreaded, would be open to a charity which now passes either ignorantly or regretfully by the workhouse gates to carry its assistance to far lesser sufferings elsewhere. A very small sum, £50 or £100, raised to start with, and expended in the fitting-up of the wards, and £25 or £50 a year afterwards, would suffice to transform the character of these wards in the very largest unions, and to remove an almost incredible amount of human suffering. How easily such sums would be raised for such a purpose, and intrusted to ladies or gentlemen of judgment and benevolence, who would act with consent of the guardians, it is needless to remark in this assembly of philanthropists. In conclusion, for sake of definiteness, it may be mentioned what are the especial items which it appears to the writers would be chiefly requisite for transforming such workhouse wards into suitable hospitals for incurables.

“*Air or water beds*, for those long bed-ridden, and *hair mattresses*.

“*Arm-chairs*, in which it would be possible for the sick and debilitated to recline. The need of these has already been described. An eminent physician has counselled that they be provided of two shapes, for two classes of patients, one of whom require to lean back, while the other can only rest leaning forward over a support to be placed across the arms of the chair. All seats for these attenuated and half-clad frames should be stuffed, or at least backed with cane.

“*Air-cushions*, for those having sores.

“*Pillows*, soft, and sufficient in number.

“*Screens* of a moveable kind, to be placed so as to isolate the sufferers when dying or in great suffering. The sight of a dying companion

is recognised in America as one of the most perilous trials to many patients.

"*Fruit or lemonade*, for such as are distressed with feverish thirst.

"*Cough-lozenges*, for such as cough all night, to their own misery and that of their neighbours.

"*Tea* of a better quality than is supplied in the house, and to be taken at the option of the patient.

"*Mutton and some vegetables* in summer, to vary the usual beef and potatoes.

"*Books and papers*, both of a serious and entertaining kind, to beguile the weary hours and afford consoling thoughts.

"*Spectacles* for such as can see to read with them, and are (as often happens) idle and blind without them for years together.

"A few religious prints and flower-pots to cheer the eyes wearied with gazing on blank walls through days of pain and nights of restlessness. The writer can witness how the common coloured engravings of the Lost Sheep and the Prodigal Son have made tears start from the eyes of many poor creatures, and how a few *leaves* and weeds have been treasured in cups beside the beds of sick in the cheerless rooms of a workhouse.

"Lastly, and above all, that which needs no money, and that which no money can purchase, the frequent presence of sympathising fellow-creatures who will read to them, converse with them, listen to their stories with interest, inquire of their sufferings with pity, and aid their faith in the love and mercy of God, by proving to them the sympathy of man.

"Individually, and even collectedly, these things may appear trifling, and the proposal of them perhaps almost an impertinence in an assembly like the present, occupied in discussing the largest schemes of beneficence. When we remember, however, the small details which have constituted matters of vast importance to ourselves in sickness, and of the anxious care with which we attended to them when nursing those dear to us, so that the failure of any one became a real sorrow to us, we must, I think, recognise that it is no trifling question, after all, whether thousands of sufferers are to partake of such little comforts, or be left to pine and die in their unaided misery. All things are great and small according to circumstances. To the poor soul enduring the pangs of cancer or dropsy in the monotonous wretchedness of the workhouse, the quality of the tea, or the possession of an easy chair, may be of more consequence than the most luxurious banquet, or the acquirements of an estate, to the healthy and happy man of the world.

"It is quite possible that the scheme now suggested may not be the best which could be devised to meet the case. Perhaps the physical comforts required ought to be provided for out of the rates. Perhaps hospitals for incurables, adequate to the numbers needing them, should be erected throughout the kingdom; but if the difficulties and objections to which both of these courses are open be almost insuperable, then it is earnestly urged that a plan so easy and so simple as the present should at least be afforded a fair trial. In each union the exertions of any one of the present audience, either lady or gentleman, would probably be sufficient to work the scheme on obtaining the consent of the board, and if the individual should be himself a poor-law guardian,

or willing to become one, he would effect the whole matter without difficulty.

"Nowhere else, it is confidently asserted, can so vast an amount of suffering be alleviated at so little cost of time or money, or with so little risk of injury to the community by the encouragement of pauperism. Out of the 80,000 who will this year die in England of consumption, dropsy, and cancer, there are at this moment tens of thousands wearing away the last month of their agonies in the workhouses. Shall we not try any plan, however humble, which may promise to bring relief to this mass of human misery? Will not the many men and women who have the power in their hands to accomplish this merciful work, give some share of time and thought to these piteous sufferers, and learn in the hospital wards of the workhouse (as perhaps can nowhere else be learned so well) how sweet a thing it is when 'the blessing of him that is ready to perish' shall come upon them?"

This plan, we are glad to learn, is already adopted in several large and important unions, and we hope the time is not distant when it will be adopted everywhere.

II.

REPORT ON SURGERY.

Ready Rules for Operations in Surgery. By ALLAN WEBB, M.D., F.R.C.S.,
Presidency Surgeon, Surgeon-Superintendent to the Native
Hospital, Calcutta, and formerly Professor of Military Surgery,
Calcutta Medical College. Second edition. (Large 8vo, London,
Churchill, 1861, pp. 196.)

THIS manual originated in the rules given to the military class when Dr. Webb held the office of Professor of Military Surgery in the Calcutta College during the Affghan war. These rules were written in Hindoostanee upon a black board in two columns; in one column were enumerated the instruments and appliances which should be at hand, and the duties which the assistants should perform, in the order in which they were called for; in the other were given the duties of the operator, with as much anatomical detail as was necessary, and no more. What was thus written in Hindoostanee in two columns on a black board is here printed in English on opposite pages, a page corresponding to a column, with all the advantages which large paper and type, and red and black letters, can give, and with sundry additions besides. Forty-nine of the principal operations are given in this way, and of them we take one as an example which happens to be a little shorter than the rest.

Amputation of the Left Shoulder-joint.

ASSISTANTS.

Arrange the Instruments upon a tray, over a folded towel, thus (*within reach*):

1. Large handkerchief.
2. Chloroform.
3. Catlin, nine inches long, half inch board.
4. Forceps, tenacula.
5. Ligatures, silk metallic.
6. Glover's needles, threaded.
7. Sponges.

OPERATOR.

1. Standing behind the patient, or to his outer side, pierces with a long catlin the integuments on the inner edge of the latissimus dorsi, opposite the middle of the axilla; pushes it upwards and forwards, till its point strike the acromion; raising the handle, its point is lowered, and protruded just before the clavicular-acromonial articulation. He now cuts downwards, and outwards, and

8. Strapping.
9. Bandages.
10. Water, ammonia, brandy.

1ST ASSISTANT.—Lays the patient on a strong table, in a good light, shoulder beyond edge of table, gives chloroform, standing to lean over his head.

2ND ASSISTANT.—Compresses the subclavian artery on the rib.

3RD ASSISTANT.—Behind the patient, with his left hand takes backwards the posterior flap.

4TH ASSISTANT.

Supports the part to be removed.

Slips his right thumb between the artery and bone, securing the artery before it is cut with the inner flap.

2ND ASSISTANT.

Applies bandage and compress.

We think many surgeons will be glad to have such a guide at their elbow as that which Dr. Webb here supplies them with, and of which we have given an example of matter, not of manner. With respect to the latter, nothing is wanting which the most liberal publisher could supply.

Clinical Surgery. The Surgical Diseases and Injuries of the Nose, Larynx, Thorax, with its contents, and of the Organs of Circulation. By THOMAS BRYANT, F.R.C.S., Assistant-Surgeon and Lecturer on Operative Surgery at Guy's Hospital, &c. Part II. (8vo, London, Churchill, 1860, pp. 151.)

Mr. Bryant is going over the clinical surgery of Guy's Hospital, and this, which is the second contribution on his part, is based upon 339 of the injuries and diseases enumerated in the title, admitted into the wards from October, 1853, to June 30th, 1860. This is a wide field for observation, and Mr. Bryant is very capable of drawing sound conclusions; and the only pity is that the facts and conclusions are not put all together, and in a more presentable form than in a mere pamphlet. Of many points which might serve for illustration we take two upon the treatment of fractured ribs—simple, and with injury to the lungs.

forms a flap from the superior posterior part of the shoulder; including the whole of the deltoid and part of the latissimus dorsi (this is held back).

2. Grasping the part to be removed with his left hand, drawing it downwards, across the chest, and rotating it inwards, he applies the heel of the knife above the insertion of the tendons into the greater tuberosity, rotates the arm outwards, dividing the remaining tendons as they present, if not already cut; passes the knife between the articulatory surfaces, then behind the bone, cuts downwards and outwards close to the bone, on inner side of the arm (followed by fingers of the assistant for the artery), to form an inferior internal flap, finishing by a direct cut inwards which divides the artery.

3. Ties arteries, sponges surface.

4. Adapts divided edges by silk or metallic stitches.

What is said upon the treatment of simple fracture of the ribs is deserving of remembrance and adoption by those to whom the practice is new.

"The treatment of these cases of simple fracture is very simple; the aim of the surgeon is to keep the ribs at rest, and thus allow nature to repair the mischief; this used to be sought for by the application of a bandage firmly rolled round the chest, but experience has taught that this practice is not only a very uncomfortable, if not a painful one, but that it has the great disadvantage of confining and restraining the action of both sides of the thorax. The plan which is usually employed at Guy's Hospital, and which I most strongly recommend, is the application of long slips of thick plaster, about one and a half to two inches broad, and long enough to extend from the spinal column to the sternum, each strip when applied overlying the one above for half its width; by this means the injured ribs are kept absolutely at rest, while those of the sound side are left free; there is little or no inconvenience from the application, and it is more durable and more efficacious than the old one of a bandage."

What is said about the treatment of fractured ribs with injury to the lungs is also deserving of attention, perhaps also of imitation.

"Bleeding, as an operation," says Mr. Bryant, "is now one rarely performed; indeed, I believe that at Guy's Hospital it is rarer than any capital operation. In these cases of lacerated lung, however, when urgent dyspnoea makes its appearance, and the powers of the patient do not forbid it, I know of nothing which affords equal benefit, and which to the patient gives greater relief or to the practitioner greater pleasure. Bleed with no sparing hand; let the blood flow freely in a full stream, and as it flows the symptoms will gradually disappear. When relief has been obtained, immediately arrest the flow. Your aim has been to make an impression through the systemic circulation upon the pulmonary, and syncope can only do harm. Watch your patient carefully, and repeat the operation if the symptoms should return, and, if necessary, repeat it a third time. I have never witnessed an instance where a third bleeding was ever required; at the same time it should be done if like symptoms make their appearance. The antimonial treatment, however, must not be neglected. The bleeding is really to relieve immediate symptoms, and to give time for the latter to take effect; when fully under its influence, the danger may be said to have disappeared, as few patients die from secondary inflammation of the lungs when once fairly under the influence of antimony."

"I have no example to quote where such a result has taken place, and believe that, with judicious treatment, cases of fractured ribs and lacerated lungs, when not dying from the immediate result of the accident, seldom sink from secondary inflammation, if actively and boldly treated."

"In the six fatal examples of such an injury, death followed at once or within a few hours of the accident; the laceration of the lung being so extensive that a fatal collapse ensued, and a speedy death; in such cases no hope can be entertained. But should reaction take place, and life be prolonged even for a short period, there is a hope, and the

surgeon's aid is never more beneficially exemplified than when acting upon it with energy and decision."

A case is also given in illustration, which deserves to be quoted.

"**CASE.**—A boy, æt. 19, when riding on the shaft of a wagon laden with two tons' weight of leather, fell, and the wheels of the cart passed completely over his chest. Intense dyspnœa and hæmoptysis immediately ensued, followed by collapse; and in this condition he was brought to the hospital. On an examination, made as carefully as the case warranted, five or six of his left upper ribs were found to be fractured near their costal cartilages, and the sternal end of the left clavicle was thrown forward. Strips of adhesive plaster were applied round the thorax to preserve the ribs at rest, and the boy was placed in bed. When reaction had taken place, antimonial wine \mathfrak{ss} , and opium $\mathfrak{m}\mathfrak{v}$, were given every three hours. The dyspnœa becoming worse, and suffocation from pulmonary congestion evidently threatening, I was called to see him, and suggested venesection. This was done to ten ounces, with immense and immediate relief, the boy gratefully acknowledging it, and stating that he felt all right again. The pulse became smaller and more compressible, the respiration quieter, and the dyspnœa disappeared. The antimony was still continued. For some few hours all went on well, but at the expiration of that period the urgent symptoms returned, and twelve hours subsequent to the first bleeding were nearly as severe as ever. Under these circumstances the operation was repeated, and with the same result. Twelve ounces of blood were withdrawn in a full stream, the blood flowing until the symptoms were relieved. The breathing then became tranquil and quite soft, the boy being again left, with the antimonial treatment, comparatively comfortable. From this time all went on favorably, no return of the dyspnœa appeared, the cough gradually subsided, and the symptoms of returning health made their appearance, the boy leaving the hospital one month after admission, cured.

"**Remarks.**—It is as difficult, if not impossible, in the description of a case, to give a correct impression of the symptoms in all their severity, as it is to render an accurate idea to its readers of the benefit of any treatment which was adopted. The case which I have just quoted, to my mind was a most admirable example of the benefit of bleeding and the antimonial treatment in injuries to the lung, and I wish that I could make as strong an impression upon my readers of the value of such a practice as the careful watching of this example made upon myself.

"There was no doubt as to the extent of injury which had been inflicted; the passage of two tons' weight over a chest, followed by direct evidence of fracture of many ribs, copious hæmoptysis and collapse, were alone sufficient to indicate to the surgeon that some severe laceration of the lung had taken place. After the lapse of a few hours, that is, as soon as the collapsed condition had passed away and the circulation was restored, the marked dyspnœa and congestion of the veins, the rapid and hard pulse, together [with other physical signs, too surely pointed to an excessive engorgement of the lungs, and that if relief was not afforded, absolute suffocation by the patient's own blood would speedily ensue. At such a crisis, antimony, however beneficial in simple cases, could not alone be trusted. There was no time for it to take effect before the mechanical process of suffocation would have done its worst, and death must almost necessarily have followed.

"Under such circumstances bleeding was performed, a free incision was made in the vein, and, as the blood flowed life seemed gradually to return. The breathing, from being an act of labour, became quiet and subdued. The eye, from being deadened and congested, became bright and natural. The pulse,

from being full and hard, became softer and less bounding; and the boy's feelings, equally valuable, from being impressed that death was nigh at hand, became more hopeful and resigned; and, as a spectator, I felt that such a hope was valid, and that success might crown our practice.

"The relief which such a practice afforded at the onset was not to be despised when like symptoms returned; and the repetition of the bleeding was followed by a repetition of all its benefits. The antimony then came in to complete the cure; the blow had been struck by the double venesection; the pulmonary vessels had been relieved of their congestion, and the antimony had now succeeded in lowering the circulation, and had thus, by preventing such a repetition of the former threatening symptoms, perfected the cure.

"These remarks, which I have been induced to make upon this case, and the practice which has been illustrated by it, have such a firm hold of my mind, from the careful watching of many similar instances to that just quoted, that I cannot recommend too strongly the general adoption of a like practice."

A Manual of Minor Surgery and Bandaging, for the use of House-Surgeons, Dressers, and Junior Practitioners. By CHRISTOPHER HEATH, F.R.C.S., Demonstrator of Anatomy at the Westminster Hospital, Surgeon to the West of London Hospital, &c. (12mo, London, Churchill, 1861, pp. 208.)

The information contained in this small volume is precisely that which is all-valuable to house-surgeons and dressers, and to all junior practitioners who have not gone through the training of house-surgeons and dressers. As an ex-house-surgeon, Mr. Heath knows very well what sort of information is wanted; as a surgeon who has been for some time engaged in the practical work of teaching students, he knows, too, how to communicate his knowledge to others in a clear and straightforward manner. We believe, indeed, that this small volume will be a great favorite with many readers; we are sure it deserves to be one. For the rest, we will only add that the text is illustrated by forty-three new and original woodcuts, from photographs taken for the purpose, and that, in addition to the essential matter of the volume, the author describes (a very necessary piece of information for many) the proper mode of making a post-mortem examination, and gives a list of the diet tables, and a selection from the pharmacopœial formulæ in use in several hospitals.

A Treatise on the Surgical Diseases of the Eye. By HAYNES WALTON, F.R.C.S., Surgeon to the Central London Ophthalmic, and to St. Mary's Hospitals, &c. Second edition. (8vo, London, Churchill, 1861, pp. 686.)

Nine years have passed since the first appearance of this standard work on the surgical diseases of the eye, and this fact alone shows the necessity for a new edition. For have not these years been marked by the introduction of the ophthalmoscope as an aid to diagnosis, by the employment of iridectomy in the treatment of glaucoma, and by other important changes in practice and opinion? A new edition was

emphatically wanted, and what was wanted we now have in the fullest sense of the word. Five chapters are entirely new:—Chapter II, on a new eye-douche; Chapter VI, on sympathetic inflammation of the eyeball; Chapter X, on aneurism in the orbit, and intra-cranial aneurism of the carotid; Chapter XXVI on iridectomy, and other operations in glaucoma; and Chapter XXVII, on the ophthalmoscope. Four chapters have been rewritten; the remaining chapters have been either recast or thoroughly revised; and several new woodcuts have been added to the 169 which illustrated and embellished the pages of the former edition.

We were able to speak very favorably of the first edition; we are able to speak as favorably of the present one. We know, indeed, of no work which has a sounder claim to be regarded as the standard work on the subject of which it treats. We have marked many places for quotation, but we must content ourselves with two or three, which will show what our author thinks about iridectomy in glaucoma—a point upon which most of our readers will, perhaps, be most anxious to have an opinion.

After giving an abstract of the views of Professor Von Graefe and others upon the nature and treatment of glaucoma, Mr. Walton says—

“The whole pathology, then, of the disease of glaucoma, according to the above observers, is that, in the first instance, the choroid circulation gets deranged, hypertrophy of the vitreous humour ensues by endosmosis, as a consequence, and the retina is acted on secondarily by pressure.

“Respecting the theory of the treatment, it is hardly necessary to point out that Graefe removes a portion of the iris, because, as he supposes, this diaphragm is the source of the aqueous secretion, and that by reducing it less fluid is poured out, less pressure is therefore produced, and accordingly as the operation is done, as to time, so is the retina completely arrested from injury—rescued from complete destruction. No allusion is made to any influence exerted on the part which is stated to be the original seat of the disease—the choroid; nor to the progress of the affection, nor to the enlarged vitreous humour. That strong objections may be raised against the hypothesis must be apparent; but I leave the reader to ponder over it, and shall remark only, that even if it be granted that the iris is the sole source of the aqueous secretion, after the removal of an eighth of it, or even a sixth, enough is left, I consider, for an abundant supply. Indeed if the aqueous fluid produce an injurious or disorganizing pressure, so long as the chambers of the eye are filled by it—no matter if the secretion proceed from a mere speck of secreting surface—the deleterious effect must be exerted. It also appears to me that, for Graefe's theory to be correct, the fluid should be reduced to a definite amount, actually less than the space that exists for its reception. But this difficulty occurs—what would stop the vitreous humour from becoming more hypertrophied?

“I suspect one of the physiological properties of the aqueous humour to be accommodation to the varying size of the chambers of the eye during the several periods of life; that the quantity is regulated by the space destined to be filled. I think, too, that this is not alto-

gether lost in diseased states; for instance, when there is a large staphyloma of the cornea, the amount is more abundant; when the chambers are reduced—either from pressure posteriorly, or that the lens is near the cornea, or touches it, or from mechanical injury to the cornea—it is less.

“There is no more marked characteristic of glaucoma than the smallness of the chambers from the lens being thrust forwards, and, consequently, the paucity of aqueous fluid.

“I would observe, with respect to the idea of the retina not being originally diseased, that lesion of it may exist inscrutable alike by the ophthalmoscope and the microscope.

“But it must not be supposed that I am writing against iridectomy with a spirit of opposition—most certainly I am doing nothing of the kind; I am merely giving my views on the *rationale* that has been advanced.

“There is just one more point connected with excision of the iris which I should like to notice. In the first memoir, that in which Graefe treats of irido-choroiditis, he attributes a large portion of the success to the reduction of the muscular tension of the iris. However this may hold good when the iris is entirely adherent to the capsule of the lens, and all communication between the chambers of the eye is cut off, it cannot, I suspect, at all apply when it is free. I am not aware that Graefe states anything to the contrary. Another surgeon has advanced a very remarkable as well as novel theory. It is his opinion that by it a more direct communication is opened between the vitreous and aqueous regions of the eye, which facilitates the play of currents between them, and thus allows any excess of fluid behind to come forward to the corneal surface, through which exosmosis is much easier than through the posterior coats—the sclerotica, choroid, and retina. As applied to a condition in which there is a communication between the fluid in the chambers of the eye, it is to me unintelligible. The exosmosis, too, is equally obscure.

“The operation differs in no essential particular from that for artificial pupil by excision when the pupil is free. It is merely on a more extended scale. More iris is to be taken away, and the cornea must therefore be incised to a greater extent. Graefe says that there is a direct relation between the amount of iris lost and the effect on the disease; but that not so much as a third, nor even a fourth, need be excised. He operates with a lance-shaped knife, introduced half a line behind the junction of the cornea and sclerotica, and directed so that its point may pass into the anterior chamber exactly at the point of union. To prevent hæmorrhage he recommends slight compression for half an hour, or an hour, and to be gradually relaxed.

“But the general condition of the eye makes the proceeding less easy than establishing a false pupil. The strip of iris is to be excised to the very circumference. The cornea, therefore, must be cut through at the extreme margin, or the incision planned according to the method of Graefe. As the iris bulges, being sometimes in actual contact with the cornea, it is apt to be penetrated; indeed, it is sure to be, without great care. With such an accident, the lens, which is almost always thrust forwards, will in all probability be wounded.

Bleeding, too, is likely to ensue and obscure the other steps of the operation, or render it imprudent to proceed. Even if the iris escape being touched, the lens is still somewhat exposed to injury, because of its anterior position and the wide area of the pupil.

"Bleeding from the iris is a very common occurrence during and after the excision, and some operators endeavour to evacuate as much blood as they can, by pressing along the cornea with the curette, or by opening the corneal incision with the same instrument."

Afterwards, when speaking of the results of iridectomy in glaucoma, Mr. Walton says—

"My own operations have not been numerous. Having been disappointed in the result in some well-selected cases of acute glaucoma (and these have been few, for with no small field of observation I do not find such cases common), I could not make that strong recommendation to patients which they required respecting the success of an operation, or the possibility of success, to induce all to submit to it.

"While I wish it most fully to be understood that I do not condemn iridectomy, I must express my own conviction that I attribute all the good effect which may follow to the mere tapping of the aqueous humour. I have found as much benefit to sight and reduction of pain from this as I have been able to trace to the other measure. In a private patient of mine, seen by several other medical men, there was subacute glaucoma in one eye, of nine months' standing. This lady had coruscations, and much pain. She could read nothing. The iris bulged, and the pupil was slightly dilated. Two days after the first tapping she could manage to read a part of one of the articles in the 'Times.' The pain was relieved, and the coruscations lessened. Vision then got as bad as before, and a slight attack of acute inflammation supervened. Several tapplings at intervals of a week enabled her to read large type, but not with clear vision. The pain quite left her, and the coruscations almost disappeared. This improved state lasted five months, as long as I attended her; during which time there was no accession of inflammation. The vitreous humour was always too hazy to afford a satisfactory examination of the fundus of the eye.

"I do not by any means infer, or wish it to be understood, that I believe tapping the aqueous humour to be a remedy for glaucoma. That it is capable, occasionally, of affording relief I am sure; but as I have not yet practised it, either as extensively as I wish nor with that degree of accurate observation which is necessary to establish facts, I would rather say no more about it.

"There is quite authority enough, even from some of our English surgeons, to warrant any inquiring student to undertake iridectomy. If a man, whose opinion in surgical matters is considered to be of a superior kind, more especially in ophthalmic subjects, speaks of it as a sure and certain remedy in glaucoma, and as arresting the disease and restoring sight in a marvellous manner, surely it ought not to be left untried. I will merely suggest that, if the trial be made, fitting cases should be selected; and that full and well-authenticated reports, extending over a sufficient period, be given by the operator to the public; and withal, that the facts be attested by others. The anonymous reports in the medical journals, on most operations, are, as a rule, of

less value, when accuracy is needed, than is supposed; and in the present case those that have been published are not exempt from this charge.

"I will mention, digressively, that I have found removal of the lens, and some of the vitreous humour, to produce relief from suffering that nothing seemed to influence; I have done it only when there has been no sight. The first case made so great an impression on me that I published it in the 'Medical Times and Gazette' for July 26th, 1859, with remarks; the following is an abstract of it:

"A female, of middle age, was sent to me in private by Mr. Wall, of Paddington, with acute glaucoma of the left eye, which was very tense and much injected. The pupil was dilated, and the iris pressed forwards by the semi-opaque lens. Vision was quite lost. I was consulted solely on account of the severe suffering, sometimes lasting for several consecutive hours, but more generally in paroxysms, which nothing had been able to subdue. The extreme vascularity of the eyeball, and the general plethora, induced me to order cupping to the temple and purgatives. Not the slightest benefit ensued. Opiates, both locally and generally, were then tried, with no more effect than securing better nights' rest than hitherto; but as the general health was deranged by the narcotics, they were discontinued. Other drugs were administered in vain. Thus, after a period of five months, the patient got no material benefit either from myself or from any other surgeon by whom she had been treated, and she had applied to several. She expressed her desire to submit to any operation likely to afford relief, and she was the more anxious as the right eye was certainly sympathetically affected, as manifested by intolerance to light and lachrymation. Rather than extirpate the eyeball, a practice that had been recommended to my patient, I determined to try the experiment of extracting the opaque lens, and evacuating some of the vitreous humour. I effected this without wounding the iris. The vitreous humour was apparently quite normal; and compress and bandage were applied to prevent hæmorrhage, and with success.

"The acute pain ceased. There was less uneasiness during the healing process, which was quickly effected, than is often experienced in operations for the extraction of cataract, complicated with loss of any of the vitreous body. Five weeks after the operation there had been no recurrence of pain, nor was there any other abnormal appearance about the eye, except that the pupil was irregular, a part of it being adherent to the corneal wound, but without prolapse. The right eye lost the sympathetic irritation."

What is said upon the condition of vision after iridectomy, and the unfavorable effects of the operation, is also very deserving of attention.

"The state of the pupil after a fully performed iridectomy, one in which as much iris has been removed as is said to be sufficient for the intended purpose—for 'small iridectomy' is declared to be useless—is such, that were the glaucomatous state to be entirely removed, and the most perfect condition of the retina established, vision could not, I think, be restored, but must be confused and inaccurate. Yet we are told of 'perfect recovery of sight,' of a patient 'seeing well'

with both eyes, and 'can read pearl type without the aid of glasses,' &c. This is difficult to comprehend. We know that when the pupil is dislocated, after the operation for the extraction of cataract, and in other instances of like displacement, there may be an amount of sight that is, under the circumstances, rather surprising; but the cases are not parallel, because that, in the latter, the pupil is mostly small, and drawn aside. After iridectomy a very large area is added to the existing, and often much expanded, pupil. Any circumstance, either iridectomy or otherwise, which leaves such a space in the iris, must, according to all that I have learned, impair the vision.

"A gentleman, who had been submitted to iridectomy in one eye, applied to me. Both eyes, it appeared, had been the subject of some disease that produced mistiness of vision, but he would allow only one to be operated on. The disease disappeared, and the eye that was untouched quite recovered. The other, so far as I could tell from my examination, was defective only to the extent occasioned by the loss of the iris.

"I attended a private patient for three attacks of severe rheumatic inflammation of the eyeball. When I saw her first, the iris was already more or less adherent to the capsule of the lens, and the retina almost insensible; the last accession of inflammation completed the adhesion of any portion of the pupil that had been free, and destroyed all sight. The lens was not opaque. She was in course of attendance on me when she was induced, by a physician, to consult another surgeon for this eye; and it so happened, that the morning on which she called, the other eye, as she expressed it, was rather red, and felt a little weak; but sight was not in the least impaired. Iridectomy was proposed, and the advantages so forcibly placed before her, and so admirably contrasted with the inevitable blindness that would follow were it neglected, that the terms were accepted. The operation was immediately executed on both eyes. I saw the lady four months afterwards. The disorganized eye was, of course, no better. The other was rendered so very imperfect by the operation—that is, by the excision of so large a portion of the iris—that she could not read the largest type, nor do any kind of plain or worsted work, nor see anything distinctly. How far the use of a pair of goggles, with a small hole in a black diaphragm, may relieve these particular cases, I cannot say.

"The unfavorable results of iridectomy have not been fully published. Little or nothing is said about the dangers, and still less about the possible bad results. There are no statistics on this head. We have had only a few hints about the escape of the vitreous humour, and hæmorrhage within the eyeball. I am told that some eyes have been lost by both occurrences. That the lens may become opaque without being wounded, but simply and directly as the consequence of the operation, I can testify, as it has happened in my own practice; and I have seen it occur to another surgeon."

A Practical Treatise on the Use of the Ophthalmoscope, being the Essay for which the Jacksonian Prize, in the year 1859, was awarded by the Royal College of Surgeons of England. By J. W. HULKE, F.R.C.S., Assistant-Surgeon to King's College Hospital and to the Royal London Ophthalmic Hospital, &c. (Large 8vo, Churchill, 1861, pp. 70.)

This is an excellent work, intended especially as a guide for students in the ophthalmoscopic examination of the eye. It is brief, clear, and beautifully illustrated. It treats, first, of the cause of the blackness of the pupil and the theory of the ophthalmoscope, and then gives a description of the principal ophthalmoscopes in use, with instructions for the management of the instrument. The ophthalmoscopic appearances of the healthy ocular structures are next passed under review, and, finally, a careful description is given of the ophthalmoscopic appearances of diseased structures and congenital imperfections. We commend this work to all who may have occasion to make a practical acquaintance with the ophthalmoscope.

Instances of Osteo-plastic Operations. By (1) M. LANGENBECK and (2) M. MAISONNEUVE. (1) 'Echo Médical,' No. 7, 1860, and 'Gaz. Hebd. de Méd. et Chir.,' October 5th, 1860; and (2) 'Journal de Méd. et Chir. Prat.,' April, 1861.

In a former volume (Vol. XXX, p. 336) we directed attention to certain investigations of M. Ollier, which show the great importance of saving the periosteum in cases of resection and in some other operations on the bones. In the present instance we direct attention to two cases in which the idea, thus suggested, has been adopted with a very satisfactory result. The first case, by M. Langenbeck, of Berlin, is reported by M. Dor, of Vevay, in the 'Echo Médical,' No. 7, 1860, and copied into the 'Gazette Hebd. de Méd. et Chirurgie' for October 5th, 1860; the second case, by M. Maisonneuve, of Paris, is from the 'Journal de Médecine et Chirurgie Pratique' for April, 1861.

1. *M. Langenbeck's case.*—Mrs. L—, æt. 40, was received into the Clinic at the commencement of the session 1859. More than two years ago an ozæna developed itself, which led, on the one hand, to a perforation of the hard palate, and, on the other, to an entire loss of the bones of the nose, conchæ and septum narium. In consequence of this destruction, the bridge of the nose was completely sunken, and the external uninjured soft parts of the nose were drawn back against the nasal processes of the superior maxilla. Notwithstanding the decided denial of the patient, yet the uneven surface of the cranium, and the means employed before her admission into the Clinic, authorised the conclusion that the destruction of the bones was caused by *syphilis*. A purulent secretion from the mucous membrane of the fauces was arrested by four weeks' treatment with the iodide of potassium. M. Langenbeck wished to defer the operation until spring, but was obliged to yield to the pressing solicitations of my patient, and the operation was performed, November 17th, 1859. The soft parts of the nose were divided by a semicir-

cular or U incision (or rather in the form of a horse-shoe) extending from the processus nasalis of the superior maxilla over the nasal cartilage, from one ala nasi to the other, opening completely into the nasal cavity—separating the lower from the upper portion. The point of the nose was then drawn downward and forward, in such a manner that the *tip* nearly touched the lip. Into the wound, thus made, a similarly shaped flap from the forehead was transplanted, whose pedicle or nourishing point was near the inner corner of the right eye, the borders of which were united to the edges of the nasal wound by silver sutures. When the flap was formed from the forehead, M. Langenbeck cut, not only through the *skin*, but through the *PERICRANIUM*, to the bone, and the whole together was then separated from the os frontis, by means of a raspator. This operation differed from others which the same surgeon has performed for repairing defects of the nose, only in the fact that the *periosteum was attached with the skin*, and formed the *base* of the flap which was transplanted into the space where the nasal bones were wanting. Afterwards, the edges of the wound in the forehead were brought together as much as possible by two sutures, the denuded portion of the os frontis covered with lint, the nasal cavity filled with charpie, and the nose covered with a cold-water compress.

November 22d, five days after the operation.—The *turgescence* and *swelling* of the *rose-coloured* flap are much more marked than after the ordinary operation. The edges of the wound are perfectly healed at nearly all points, only here and there a superficial suppuration. M. Langenbeck remarks:—"The defect in this operation is, according to my idea, that the periosteal surface of the flap, twisted to cover the opening in the nose, will be in constant contact with the current of air from the nostrils, and, as a natural result, must suppurate and granulate. Whether the pericranium remains capable of producing bone under these conditions, seems very doubtful. The denuding of the os frontis, and the possible superficial exfoliation of the same, would hardly be thought of any account, if the design of the operation is thereby accomplished. In cases of complete destruction of the nose, the chances of this operation would be far more favorable. We could cut the skin (surrounding the nasal defect) to the bone, loosen it with the periosteum, and twist it over so that the epidermis would be turned towards the nasal cavity, which would leave the periosteal surface looking upward. *Upon this surface*, for a basis, a flap of skin and periosteum could be transplanted from the forehead, and in this manner the *pericranium* of the frontal flap would lie on the *periosteum* of the facial flap; that is, two periosteal surfaces would be together, and thus render the chances for bony deposit much more favorable. I have frequently, when supplying defects in the nose by frontal flaps, used the surrounding skin in the manner just cited (but without the periosteum) to form a lining for the other flaps, particularly as in this manner I prevented the adhering of the nasal surfaces, which so easily occurs in these operations."

December 2d.—Progressing favorably in all respects, but as yet no trace of the formation of new bone. Scarcely any turgescence of the flap, and the colour of its cutaneous surface quite natural. The wound in the forehead not at all conspicuous, and no exfoliation of the superficial layers of the denuded bone.

A week later, a microscopic examination of the edge of the flap detected many cartilaginous cells, with unmistakable traces of true osseous tissue.

February 6th.—The framework of the nose is now perfectly firm, and the sound introduced into the nostrils meets with a resistance which is unmistakably bony. The nostrils, moreover, are quite open and smooth. The new osseous tissue appears to have been deposited between the periosteum and

the skin, though this is scarcely probable. The flap itself has now returned to its natural dimensions, and become thoroughly adherent to the periosteum. The wound on the forehead is granulating healthily, and many of the granulations arise directly from the bone precisely as if the periosteum had not been disturbed. There is, however, in one angle a minute portion of dead bone, which is not yet quite loose.

At the last report (the date is not given) the patient was still in the hospital; the small sequestrum had been cast off, and the wound in the forehead had healed; and in other respects she was progressing favourably, but only slowly.

In cases of this kind M. Langenbeck always operates several times, the first operation having for its object simply the transplantation of the flap, the successive operations being directed to the trimming of this flap into an ornamental nose. Hence the present patient is not done with.

2. *M. Maisonneuve's case.*—In the month of August, 1855, M. Maisonneuve was consulted by a young man whose right leg was in a frightful condition. Its size was enormous, and deep ulceration was present over its entire surface and it was but too obvious that the whole shaft of the tibia was in a state of necrosis. The patient stated that some two years before, while engaged in gymnastic exercises, he had met with a severe fall, that deep-seated aching pain in the leg had been the consequence, together with general tumefaction of the limb, and subsequently abscesses, which had gradually brought about the present condition, viz.—copious and fetid suppuration, enormous increase in the size of the leg, extreme emaciation, hectic fever, &c. The parents, moreover, declared that all the resources of medicine had been exhausted, that several of the most eminent surgeons of Paris had unanimously recommended amputation, and that Mr. Velpeau, to whom, as a last resort, the matter was referred, had informed the family that all hope of preserving the limb must be abandoned.

Despite these unfavorable opinions, however, M. Maisonneuve resolved to remove the bone by detaching it from the peritoneum, and he tells us himself what he did and how he fared.

"The patient having been fully placed under the influence of chloroform, I performed along the entire length of the tibia, in an extent of about fourteen inches, a section penetrating to the bone through the periosteum, which was already thickened and lined with a new, soft, and spongy, osseous secretion. At each extremity of this long incision I divided the parts transversely, so as to be able, by turning over the flaps on each side, fully to expose the seat of disease. I thus ascertained that the entire shaft of the tibia was mortified, the articular extremities alone remaining healthy.

"I then proceeded, without delay, to separate the dead bone from the adjacent structures, and succeeded, not without difficulty, in extricating it completely.

"The consequences of this long and arduous operation were these. The traumatic fever was extremely moderate; the suppuration, hitherto copious and fetid, was speedily replaced by a healthy puriform secretion, and, extraordinary as it may appear, the young patient was able, so early as the fortieth day, to rise and walk with crutches, as if he had merely been affected with simple fracture of the limb.

"An entirely new bone had been formed, and so complete was the restoration, that had I not preserved the shaft of the tibia, removed six weeks before, I myself could scarcely have credited the fact."

This bone, which M. Maisonneuve exhibited at a meeting of the Academy of Medicine, is twelve inches in length, fifteen lines in thickness at its upper extremity, and eleven lines in diameter at its lower end. The three surfaces are smooth and compact in the two lower thirds, and rugged and swollen in the remainder. The patient (who also made his appearance at the same meeting) is now healthy and vigorous; the formerly diseased leg differs in no respect from the other, except in the scar, which is the only memento of the formidable process above described; he can run, leap, or walk as if he had undergone no surgical operation whatever.

A Treatise on Diseases of the Joints. By RICHARD BARWELL, F.R.C.S., Assistant-Surgeon to the Charing Cross Hospital, &c. Illustrated by engravings on wood. (8vo. London, Churchill, 1861, pp. 469.)

Mr. Barwell is already favorably known in connexion with certain minute investigations into the morbid actions of synovial membranes, cartilage, and bone. Now he comes before us with excellent claims to be regarded as a clear-headed, clinical investigator in the comprehensive subject of diseases of the joints. The time had certainly come for a new work on this subject, for the standard works have not, for some time past, fully and fairly represented the knowledge of the present day.

Mr. Barwell divides his subject into two parts, one including the physiological anatomy of the joints and the diseases affecting the various structures of the articulation, the other including the diseases commencing in the bone. The morbid actions of synovial membranes, cartilage, and bone, are carefully and minutely investigated, and the evidence of cases is adduced at considerable length. Debated questions, as, for example, that of excision *versus* amputation, are impartially considered; and, as far as we have been able to detect, no material point has been overlooked or carelessly handled, and nothing left unsaid which is necessary to enable the reader to arrive at an independent conclusion.

Mr. Barwell is no rash practitioner, neither is he a timid one where boldness is required. Thus, he agrees with Mr. Gay as to the advisability of making free incisions into the joints when suppuration has taken place. He does not use the knife in this case, for the same reason as that which influences Mr. Gay, that is, to afford an outlet to shreds of cartilage which may be shed into the articular cavity.

"It is," he says, "for other reasons that I cordially commend the value of such treatment. Some French authorities, Petit, Boyer, and others, might also be quoted in favour of this plan. A joint once suppurated has lost that sensitiveness to the contact of air which it normally possesses; it is an abscess, and one cause of the great constitutional disturbance produced by the disease is confinement of matter deep among bones and tough, fibrous structures. Therefore, if a depending part of the joint can be in any way reached, it should be widely incised; but the part *must* be depending. Pus must not be allowed to stagnate and putrefy in the recesses of the cavity, or pyæmia will be pretty certain. The difficulty of getting at the hip, except by a very deep cut, would

render such means inapplicable to that joint. The trocar would be a better method of emptying the cavity; but the greatest caution must be used that no air be permitted to enter."

Mr. Barwell also has his own opinion in some points of pathology, and holds it upon good grounds. Thus, speaking upon the affection generally known as chronic rheumatic arthritis, he says:

"This disease, since Dr. Haygarth described one of its appearances as nodosity of the joints, has been regarded with much interest by a large number of careful observers. Among the most zealous and trustworthy of the authors on this subject may be reckoned my colleague, Mr. E. Canton, of the Charing Cross Hospital; Mr. Robert Adams and Dr. Smith, of Dublin. The malady is, in general, either a sequela of acute rheumatism, a result of exposure to cold, a gouty diathesis, influenced by some cachectic condition of system; or it may be traceable to uterine disorder, and is combined, with either luxurious or very scanty feeding. Sir B. Brodie observed it among the upper servants, hall porters, and tall footmen, of large London houses; Mr. Adams, among the damply lodged and potato-fed peasants of Ireland; it is also a very common disease in Holland. As far as I am aware, it does not exist in hot, dry climates. It rarely attacks one joint alone; but generally invades them symmetrically, picking out the same articulation on either side in succession, until a large proportion of the joints of the body are rendered fixed and useless. Sometimes the disease affects only one joint, being produced by accident or other cause. Such a circumstance very rarely happens, except at the hip, where it has acquired the name of *morbus coxæ senilis*, *coxitis*, *sicca*, &c.

"This is in accordance with all our ideas of a constitutional disease, and the peculiarity of the changes, which the parts undergo, strengthens still further such an opinion. The morbid actions are never found confined to one structure; but are, summed up as shortly as possible, these:—the joint bones are flattened, that is, increased in circumference and lessened in capacity; the surfaces are void of cartilage; the bone polished; the articular facets surrounded by large, stalactitic osteophytes; the inner surface of the synovial membrane is hirsute, with hypertrophied fringes, which contain false cartilages or bony growths; the subsynovial tissues are enormously thickened, and frequently contain semicircular pieces of cartilage, or of osseous matter.

"It is undoubted that the first perceptible symptom in the living subject is effusion into the synovial membrane of the joint, a condition in its appearances exactly similar to hydrarthrosis; and if we have an opportunity of examining, after death, a joint in these early stages, we shall, as Mr. Robert Adams has remarked, 'find the morbid appearances of the disease formerly called *hydrops articuli*.' It nevertheless is a subject of little doubt, in my mind, that the morbid action does not begin in the synovial membrane, but in the bones; that it is in reality a rheumatic osteitis. The enormous changes which we find in the shape and condition of the joint-ends are more than could be produced by a mere synovial inflammation; moreover, it is not merely the joint-ends which are changed by this disease, but

the whole bone. I have seen the entire pelvis, the whole tibia, and other large bones, altered by this malady. The much greater difficulty and trouble involved in making out an inflammation of the bone than of soft parts, is a reason why the first effect upon this texture should be overlooked; yet, from comparing a large number of specimens, several of which were kindly lent me by Mr. Canton, and by observing the different conditions of parts in various degrees of disease, I have concluded that the following is the true cause of the morbid action.

"First, an osteitis, which causes increased density of the bone from thickening of its external shell, and of all the plates of the cancelli—the inflammation does not attack a surface in preference to another part, but invades the whole mass of the bone; its more frequent occurrence at a joint-end is simply due, like strumous osteitis, to the more active and vascular condition of that part. Very soon the textures in the neighbourhood of the bone participate in the disease, the periarticular tissues become inflamed, and the action, like all rheumatic inflammations, tends to development of its products; thus these parts become condensed, and even converted into bone. Hence, the large stalactitic osteophytes, the loose bones in the fibrous tissues. For the same reason, although the cartilages disappear, they are never seen ulcerating; on the contrary, they ossify. In early conditions these structures are found very thin and pink; and upon examining sections through cartilage and bone, the articular lamella is found to be changing in character, the black, undeveloped bone-cells throwing out canaliculi, and merging into ordinary bone-corpuscles, while osseous matter encroaches on the cartilage. When the whole thickness of this substance is converted into bone there begins a process of wearing away and polishing. The wear, of course, takes place chiefly in the lines of greatest movement, hence there arise ridges and furrows in these directions; those on the hinge-joints are all straight; those in the ball-and-socket-joints curvilinear, and diverging from the centre, like the engine-turning on the back of a watch. The polishing is in part due to friction, in part to a peculiar change in the bone, which has been termed *porcellanous deposit*. Mr. Quekett has very aptly compared this change with the mode adopted by a French polisher to overcome the difficulty in polishing a piece of wood at the ends, where all the fibres abut, and the vessels open; he fills up the spaces with wax, or some resinous substance, which gives the surface sufficient smoothness to accept a polish. On removing thin slices with a saw, and grinding them down on the side formerly attached, so as to leave the porcellanous surface, the Haversian canals will be found occupied by badly organized calcareous matter, which seems in some instances so rapidly deposited that it strangles the vessels, stagnating their contents, so that the whole surface is stained of a yellow or orange colour.

"At a certain period of the inflammation the thickened and condensed bone becomes gradually lighter. It is the quality of all inflammations first to cause induration, then, as nutrition decreases, softening, or a similar act. The bone does not become soft, but rarified; when in this state it is dried and sawn through it is found

to contain a quantity of a very peculiar powder, each grain having a remarkably definite size and shape—these particles are ossified cells. It is impossible to trace the development of these bodies; they may merely be the cells of the medulla that have been thus changed; but I rather believe them to be the cells which were contained in the lacunæ. The external shell of the bone and the walls of the cancelli have now become thinned instead of thickened, and examination by the microscope shows them to be very plainly laminated; in fact, they look like a collection of ossified fibres, among which very elongated and narrow lacunæ are placed. The gradual rarefaction of the bone, and the thinning of both external and internal lamellæ, are due, I believe, to the slow ossification of the bone-cells, which starves the intercellular osseous material, and allows its gradual absorption. Hence the peculiar action, termed osteoporosis—enlargement of the Haversian canals—produced by absorption of the bony lining of those channels. Even the osteophytes, which at first are solid and thick, become mere cases of thin bone, divided in their interior into spaces by slight cancellar plates. But while this rarefying action goes on where the osteitis is old, new indurating material is (as in all except diffuse inflammations) deposited around the focus of inflammation, *i.e.* in the newly inflamed parts, and to these two simultaneous processes the change in shape of all the articulating surfaces is due, the heads of the bone become flat and broad, while a similar change takes place in all the cavities, glenoid, acetabular, &c.

“It is to be observed that the immobility of the joints does not result from ankylosis, an action which does not, as far as I am aware, ever take place in this peculiar form of disease. This condition is produced by the great development of osteophytes, which, sprouting out close to the joint surfaces, act as buttresses, preventing motion by the contact of those springing from one bone with those arising from the other.

“There are some minor but curious points worthy of mention; one of them is the ultimate absorption of certain parts of the fibrous tissues. This appears due to the pressure exercised by the new bony growths; thus, the capsules of the hip and shoulder, the ligaments of the knee, the biceps tendon of the arm, are frequently found absorbed; this latter is also sometimes displaced inwards by the osteophytes sprouting up beneath it. Another point which I desire to notice, but whose complete investigation must be left to subsequent examination, is the connexion between a hirsute condition of the synovial membrane and a rheumatic inflammatory state of the neighbouring bone. In those autopsies in which I have found the synovial fringes hypertrophied the bone has been thus altered; chiefly very much condensed; the cartilages very thin (undergoing ossification from the deep surface) and pink. Be it observed, that in farther advanced stages these enlarged processes arise from among the irregular chasms left in the changing bone. That there is some connexion between hydrarthrosis, with change of structure of the synovial membrane, and chronic rheumatic arthritis, can hardly be doubted; but that the former is a mild and merely local manifestation of the latter disease would be, in the present state of our knowledge, rather too hazardous an assertion.”

A Statistical Examination of the Operation of Deligation of the Primitive Iliac Artery, embracing the history, in abstract, of thirty-two cases.
By Dr. STEPHEN SMITH, Surgeon to Bellevue Hospital, New York.
(Amer. Quart. Journ. of Med. Science, July, 1860.)

Having recently had occasion to apply a ligature to the primitive iliac artery for aneurism of the external iliac, Dr. Smith has been led to inquire carefully into the history of the operation. Including his own, the cases collected are thirty-two in number, fifteen occurring in the United States, five in England, one in Ireland, four in Scotland, two in South America, two in France, one in Germany, and two in Russia. The operation was first performed by Dr. Gibson, of Philadelphia, in 1812, and thus American surgeons may claim the credit of originating as well as most frequently performing it. Dr. Stephen Smith's own case is as follows :

CASE.—The patient was a female, æt. 33, healthy; two years ago, while lifting a tub of water, having one knee pressing against the tub, she felt something snap in her right groin, but had no inconvenience until evening, when that limb became stiff and lame. On the following day this stiffness was much increased, and three or four days later she experienced sharp, stinging pains over the anterior surface of that thigh; several days after this she first noticed a small tumour the size of an almond, just below Poupart's ligament; about three weeks after (October 4th, 1856) she entered Bellevue Hospital, and came under the care of Dr. Lidell. The tumour was the size of a hen's egg, and being recognised as an aneurism, the external iliac artery was tied. She recovered from this operation, the tumour diminishing somewhat in size at first, but pulsation soon after returned. She refused further treatment, and left the hospital. She was readmitted August 21st, 1858, the tumour having again begun to increase, and causing great pain down the leg. On examination the tumour was found to be somewhat flattened, more than half of its volume being below Poupart's ligament, and having a diameter of about three inches; pulsation and bruit very distinct; pain down the front and inner aspect of thigh intense. After remaining in the hospital about a month, during which the tumour gradually enlarged, and her sufferings increased in severity, it was determined to apply a ligature to the primitive iliac.

Operation.—Chloroform administered; incision commenced near the extremity of the last rib and terminated at the internal abdominal ring, the upper two thirds of the incision being straight and the lower third curved inwards, the curve being quite sharp near the termination of the wound. Some difficulty was experienced in the dissection, owing to the agglutination of the tissues following the former operation; no accident; not more than an ounce of blood lost; primitive iliac enlarged to nearly the size of the normal abdominal aorta.

Progress.—Pulsation ceased; temperature of limb normal; pain gradually diminished; opium was freely administered in anticipation of peritonitis; the external wound united by first intention, except where occupied by the ligature; suppuration became free at this point; symptoms continued favorable until the thirtieth day, when slight hæmorrhage occurred at the wound, the ligature being still firm; hæmorrhage recurred for several days; ligature separated on the thirty-sixth day, with free discharge of pus; no hæmorrhage for a week, during which time the patient's general condition

rapidly improved. On the fortieth day blood again appeared in the wound, and from that time to her death, on the forty-eighth day after the operation, the hæmorrhage became more and more frequent, and though frequently almost instantly controlled by pressure upon the abdominal aorta, the total amount of blood lost was very great.

Autopsy.—External wound united firmly, except at the lower point; a large abscess occupied the iliac fossa, filled with grumous blood and communicating with the artery at the point where the ligature was applied; artery completely severed by ligature, the upper extremity being partially filled with a coagulum, but allowing the escape of the injection thrown into the aorta; aneurism in an advanced state of consolidation.

In the thirty-two cases of which Dr. Smith furnishes abstracts in his paper, the operation was undertaken—(1) for the arrest of hæmorrhage; or (2) for the cure of aneurism; or (3) for the cure of pulsating tumours which proved to be malignant growths; or (4) for the prevention of hæmorrhage in the removal of a morbid growth; and the cases are grouped under one or other of these heads, although it appears that in the great majority of them an aneurism led directly or remotely to the operation.

1. For the arrest of hæmorrhage, we find eleven cases recorded, of which ten proved fatal, the mortality being 91 per cent. The earliest period of death after the operation was four hours; the latest, the twenty-fifth day—the average being eight days. The cause of death in four instances was secondary hæmorrhage; in five, immediate exhaustion; in one peritonitis. In two of these cases the procedure was instituted for wounds involving, in one, the external iliac, in the other, the internal epigastric; in one for secondary hæmorrhage from the stump after amputation of the thigh; in two from rupture of an aneurism; in three from hæmorrhage after deligation of the external iliac; in two from incisions into aneurismal tumours; and in one from rupture of the internal iliac in an attempt at its ligation for aneurism of the gluteal artery. In the case of recovery the operation was performed for hæmorrhage after ligation of the external iliac.

2. In the second group fifteen cases are reported, five resulting in recovery, the mortality being 66½ per cent. The patient of Dr. Mott was permanently cured and is still alive, the artery having been tied for aneurism of the external iliac. This operation was performed in 1857, the second in order of succession. Of these fifteen cases, all but one were males; the right external iliac was affected in eight instances, the left in six, and in one case the side is not given. The cause of death in the ten fatal cases was, in two, hæmorrhage; in two, exhaustion; in one, gangrene of the leg; in one, gangrene of the aneurismal sac and the surrounding parts; in one, erysipelas; in one, dysentery; in one, suppuration of the sac; and in one, peritonitis.

3. The common iliac was tied four times for malignant tumours simulating aneurisms. In the case of Mr. Guthrie, his colleagues agreed with him that it was one of aneurism, but the tumour afterwards proved to be malignant. This was the only one of the four patients who recovered.

4. For the prevention of hæmorrhage two cases are recorded, one being for encephaloid disease, the other for aneurism by anastomosis,

in a child six weeks old. Both terminated fatally, the causes of death being, respectively, exhaustion and abscess of the knee.

In reviewing the facts contained in this paper, it appears that in seventeen cases the right primitive iliac was tied, and in thirteen the left primitive iliac, the operation being required, directly or indirectly, twenty-four times for aneurism. The tumour involved the right external iliac eleven times, the left seven; thus showing the greater liability of the former to aneurism. That males are more exposed to the exciting causes of aneurism is verified by the fact that twenty-seven of these cases occurred in males, and three in females. The sex is not given in the remaining two. The ages of the patients ranged from six weeks to fifty-nine years. The date of separation of the ligature is mentioned in twelve cases, the shortest period being eight days, the longest thirty-six days; the average being twenty-three days. In one case the silver wire was used; and in another the ligature was composed of catgut; the latter came away on the eighth day and was found to be dissolved. That the operation of casting a ligature around the common iliac is one of the most unsuccessful in all surgery is shown by the fact of twenty-five of the thirty-two cases having died, being a mortality of about 78½ per cent.

From numerous trials upon the dead subject, Dr. Smith advises the following incision as affording the most ready access to the artery :

Commence the incision just anterior to the extremity of the second false rib (eleventh), and terminate it just above the internal ring by a sharp curve inward of one inch; this incision will be about seven inches in length, and will pass about an inch and a half within the anterior superior spinous process; the curve at the lower extremity will allow the most perfect freedom in the elevation of the peritoneum, and the complete exposure of the artery.

Description of a Case of Intra-parietal Inguinal Hernia. By Mr. JOHN BIRKETT, Surgeon to Guy's Hospital, &c. ('Guy's Hospital Reports,' 3rd series, vol. vii, 1861.)

This interesting case offers many points for special observation.

1. The nature of the hernia. It was developed at a very early period of life, and the descent of the bowel took place in consequence of the vaginal process of the peritoneum remaining open. Doubtless this non-closure of the canal was, in a measure dependent upon the malposition of the testis. When he was twenty-one years old, in the prime of life, strong and robust, a portion of bowel descended into the right side of the scrotum at once, and produced a swelling as large as his fist. Associated with the knowledge of the absence of the testis from the scrotum, and therefore the probability of an unclosed vaginal process of the peritoneum, such an occurrence is by no means strikingly remarkable. But had the testis been in the scrotum, and its vaginal coverings perfect so that the closed serous cavity in front of that organ shut it off from contact with a hernial protrusion, such a sudden descent along a serous canal would scarcely be admitted by most surgeons. But replies to repeated inquiries in relation to the development of inguinal hernie induce the belief that, in a very much

larger proportion of cases than is usually admitted, a hernia suddenly descends through the inguinal canal into the scrotum by entering a serous sheath continuous with the general peritoneal cavity. This canal is due to the non-obliteration of that part of the vaginal process of the peritoneum between the internal abdominal ring and the testis. This serous canal, then, constitutes the hernial sac.

2. Before the development of the scrotal hernia, as long as he could remember, there had been a permanent swelling in the anterior abdominal walls of the right iliac region. This was doubtless dependent upon an extension of the vaginal process of the peritoneum between the deep layer of the abdominal muscles and the aponeurosis of the external oblique muscle, thus forming a sac communicating with the peritoneal cavity, and admitting a hernia. From the account given by the patient it would appear that this sac always contained more or less intestine, but that it had never troubled him very much.

The condition of a coil of the small intestine, as seen post mortem, likewise indicated that it had been subjected to some long-continued pressure, for one part was much contracted, and its coats indurated.

3. The abnormal site of the testis might have been the cause of the formation of the intra-parietal sac. Placed, as it was, close to the external abdominal ring, and retained there by the termination of the vaginal process of the peritoneum at the upper extremity of the scrotum, it may have acted, in the first instance, as a plug to the external abdominal ring, and thus prevented a hernia passing through it. As, however, there was a continual pressure from within the abdomen outwards, the hernial sac extended in that direction and between those structures which offered the least amount of resistance to its course. This sac was slowly formed, and when it had reached a considerable size and could extend no further, nor be dilated by a larger portion of intestine, the impulse of the abdominal muscles during violent exertion forced the hernia past the testis into the scrotum. The abdominal orifice of the intra-parietal sac which was in relation with the internal abdominal ring was very capacious, and appeared, from its dimensions, to be incapable of tightly embracing the hernial protrusion. The bowel appeared to be rather twisted over upon itself than strangulated.

4. The development of the intra-parietal sac cannot, in this instance, be attributed to the pressure of a truss. The man stated that he had never made use of any appliance of the kind until after the formation of the scrotal hernia. Mr. Birkett alludes to this circumstance particularly, because some writers attribute the formation of the intra-parietal sac to the pressure exerted by the truss over the external abdominal ring. In this way the hernia, being prevented descending through the external ring, but passing through the internal, dilates the sac in the inguinal region, and there forms a large cavity.

5. The intra-parietal sac could not result from the use of the taxis, either by the patient or a surgeon. There does not appear to have been at any time the least difficulty in reducing the protrusion sufficiently to prevent the patient suffering from what remained behind in the sac.

CASE.—*Intra-parietal and oblique inguinal scrotal hernia on the same side ;*

testis in the inguinal canal.—T. S.—, thirty-six years old, was admitted into Guy's Hospital on February 12th, 1861, at about 6.30 p.m., and died the next day at 12.30 p.m. The house-surgeon, Mr. Tuck, and the dresser, Dr. Caldwell, made the following notes of the case. The patient, a well-made, muscular man, was in a state of collapse when admitted. He did not make any complaint of pain; the tongue was clean, nor did he vomit after admission. He had been ill and slowly losing strength for some time, although he had worked until the 9th inst.

Fifteen years since, when twenty-one years old, he was suddenly ruptured during efforts of violent exertion. The hernia descended into the right side of the scrotum, and the swelling was as large as his fist. This was the first time he had ever noticed a swelling in the scrotum, but he had observed that the right testicle was wanting. He never wore a truss of any kind until after the development of the scrotal hernia. For a period as long as he could remember he had been conscious of the existence of a permanent swelling in the anterior abdominal walls of the right iliac region. Although it varied in size, the whole of, and rather more than, the true inguinal region was filled up with this swelling, which extended upwards and outwards to the crest of the ilium. The variation in size was never great.

When in bed, the house-surgeon observed a tense swelling in the right side of the scrotum, as large as the fist of an adult person, and closely resembling in shape a hydrocele of the tunica vaginalis. The neck of the tumour was smaller and longer than it usually appears in scrotal hernia; in fact, it was exactly the shape of an ordinary soda-water bottle. The testis could not be felt on the same side as the swelling. The left testis was lodged in the scrotum. Contraction of the abdominal walls produced a slight impulse at the neck of the scrotal tumour. There was no ecchymosis of the scrotum. The swelling in the iliac region was double the size of an adult's fist, of oval shape, and with a slight depression traversing its surface in the centre obliquely from the umbilicus downwards and outwards in a line towards the trochanter major. This was not so tense as the scrotal swelling. There was an impulse communicated to the contents of this swelling, when the patient coughed. It also moved in concert with the movements of the anterior abdominal walls.

The house-surgeon did not employ any taxis at first, but ice was applied to both the tumours. He gave the man stimuli and half a drachm of tincture of opium.

The history of the case immediately before admission was as follows:

On Saturday, February 9th.—He was at work, but felt very ill.

Sunday, 10th.—The bowels were freely relieved, but he became worse.

Monday, 11th.—The hernia suddenly came down into the scrotum as he was rising from his bed in the morning. Reduction of the hernia was slightly attempted by a surgeon and himself; but failing to replace it, he was brought to the hospital on Tuesday, the 12th inst.

Early on Tuesday morning he once vomited some bilious fluid.

When the ice had been applied about two hours the scrotal tumour became softer, and the scrotum contracted. At the expiration of a few more hours the protrusion passed easily into the abdominal cavity.

During this period, however, neither increase nor diminution of size, nor alteration of shape, occurred in the intra-parietal tumour. It should be remarked that the patient had never alluded to this swelling as a cause of his illness.

The bowels were moderately relieved about 9 a.m. on the 13th February; but in spite of the liberal employment of stimuli and every means to sustain

life, he expired on this day at 12.30 p.m. He was under treatment in the hospital about eighteen hours only.

Necropsy.—Description by Dr. Wilks.—There was general peritonitis, which affected chiefly the lower region of the abdomen and its contents. Several portions of the small intestines were of a dark-red colour, from their coats being filled with effused blood.

The hernia which had been reduced was not in the scrotum, but in a sac situated in the anterior abdominal walls near the crest of the ilium. The scrotal sac was empty. It consisted of a prolongation from the great peritoneal sac (the vaginal process of the peritoneum), and the testis was lying on its posterior wall near its termination. It communicated above with the parietal sac. This (the parietal sac) contained a coil of intestine nearly a foot long, which was easily drawn through the orifice of the hernial sac into the abdomen.

The portion of intestine in the sac was the lower part of the ileum. It did not appear strangulated by the orifice of the sac, but its surfaces were adherent just as it entered it, and one of the portions was much contracted, as well as the whole twisted on itself.

In addition to this very interesting case, Mr. Birkett gives references to, and abstracts of, several cases which were probably of a similar kind.

On the Use of Tubular Bougies in the Treatment of Stricture of the Rectum. By Mr. TUFFNELL, Surgeon to the City of Dublin Hospital, &c. ('Dublin Journal of Medical Science,' August, 1861.)

The instruments described in this paper will, we doubt not, be found to possess marked advantages over all the other kinds of bougie hitherto in use. Mr. Tuffnell has already had practical evidence of their value in several cases, but the case which led to their use is sufficient in itself to set the question at rest, if there were any doubt. This case is related as follows:

"In the summer of 1858 I was consulted by a gentleman, æt. 42, for fistula in ano. His general health was greatly impaired; he was nervous and irritable to a degree; he had no appetite, and what little food he did take, he was unable to digest. He bore the appearance of a man who had suffered from climate, and, in reply to my inquiries as to tropical residence, he stated that he had been in India for some years, but had been obliged to return in consequence of his health giving way. Upon questioning him as to his antecedents, he stated that from childhood he had never been very strong; that he was delicate, and, as far back as he could recollect, had been always suffering from indigestion and derangement of the primæ viæ.

"In 1839 he went to India, being then upwards of twenty years of age. On board ship he suffered from constipation, and, shortly after his arrival in the country, had acute inflammation of the liver, which was succeeded by dysentery, for he stated that he had frequent discharge of stools of a mucous character, tinged with blood, accompanied by great straining and tenesmus. For this attack (which he himself believed to have been one of piles, but which was evidently of dysentery, in a sub-acute form) he was freely leeches around the anus.

He did not, however, permanently recover, and after several consecutive illnesses of more or less duration, was, in 1846, obliged to return to England, and relinquish the position he held. He was now suffering from urgent and frequent calls to stool, with straining of the bowels, and great irritation of the urethra, the alvine evacuations being of scybalous character, and he suffered frequently from rigors. He continued in invalid health, sometimes a little better, but always being more or less in pain, until 1857, when an abscess formed by the side of the rectum, which burst and degenerated into fistula. All his symptoms now became aggravated, and from this date until July, 1858, his life was one of continued misery. It was now that I first saw him. Although dreading the operation, he felt compelled to submit to it, and it was with a view to having it performed that he sought my aid. The shattered condition of his health at this time might have induced a suspicion that he was labouring under pulmonary disease; but careful stethoscopic examination gave no such indication, and the whole history pointed to the alimentary canal as being the seat and origin of his disorder. In consequence of his extreme sensitiveness to pain, and general apprehension and shrinking from examination of the bowel, I deemed it advisable to place him fully under the influence of chloroform, and it was whilst in a state of perfect anæsthesia that I was enabled to make the searching examination which informed me of the full and extensive state of the case. I need hardly observe that the fistula was but a mere concomitant of the more serious disease which existed in the form of organic stricture of the bowel, all but obliterating the canal with the cavity of the intestine below in one mass of ulceration, the membrane almost hanging in shreds. The indication as to treatment was evident; a passage for the intestinal contents *must* be speedily effected, or the patient succumb to the wearying consequences of the disease. The aperture existing in the stricture was so small as barely to admit a fine urethra bougie; it was, in fact, all but closed. Any attempt to introduce an ordinary rectum bougie would have been out of the question, for not the slightest pressure of a continuous kind could, indeed, have been borne by the patient. Under these circumstances it became necessary to resort to some method that would enable me to command the stricture, and for this purpose I determined to adopt a modification of Hutton's railway catheter, or Wakley's urethra tube, and so, penetrating the contracted mass, gain access to the gut above, and evacuate the contents lodged in the intestine, thus obviating the constitutional distress under which he was suffering. I did nothing more at that visit, but, prior to the next, provided myself with the following apparatus:—I took a piece of very fine gutta-percha cord, equal in size to about a No. 8 urethra bougie, and in length eighteen inches; next, a portion of gutta-percha tubing (just sufficiently large to pass freely over the cord), and, softening one end of this tubing in boiling water, I drew it out so as to make it slide with a feather edge over the central rod or guide. In this way I at once secured the command of the stricture, and by manipulating the solid piece of gutta-percha through the stricture with my right hand, guided by the forefinger of the left, and sliding the tubular sheath over, I was enabled to pass unhesitatingly through the narrowed

portion of the gut, to dilate the stricture itself, and also to discharge through the central cavity of the bougie the secretions and excretions which were detained in the intestine above. Each and all of these objects were at once obtained, and the rectum unloaded to an extent which it had not been, I believe, for years before. The progress of the case from this moment was most satisfactory. The bougie thus introduced was passed at first every third day, and allowed to remain in for nearly an hour; after this, every fifth day, and longer retained; subsequently once a fortnight, and the size correspondingly increased, until an instrument of large dimensions passed readily through the stricture.

"The general health of the patient rapidly improved, and all the sufferings which he had formerly attributed to the fistula ceased; indeed, the little that its presence really had to say to the case is proved by the circumstance that he has declined to have it operated upon since, preferring to submit to the slight annoyance which it does occasion than to be subjected again to division.

"Now, in disposing thus summarily of this case, let it not be supposed that the mere dilatation of the stricture was the only matter considered in the treatment, or that even the mode of introduction and the passing of the bougie are not subjects requiring judgment, and of the greatest importance in the conducting of the case."

Speaking more particularly of the form of bougies, Mr. Tufnell says—

"These instruments, as hitherto employed, have been variously constructed as to material, consisting of wax, gum-elastic, ivory or bone, polished metal and membrane; but all similarly circumstanced in this one respect, viz., that they have had no central cavity admitting of an artificial exit for the intestinal contents, and entrance for such medicaments as the surgeon may choose to apply to the structures implicated in the disease. It would be a contradiction were I now to introduce an instrument purporting to be superior, and advocate then the employment of any other; but it is not from prejudice or fancy that I recommend its adoption, but from the conviction that in practice every object that can possibly be obtained by the old pattern is equally gained by the new, with additional advantage. Being a hollow tube, no sooner is the central guiding rod withdrawn, than free exit is given to mucus, pus, blood, or other fluid secretion which may be lodged in the pouch-like cavity which exists almost invariably above the stricture; and not only are these otherwise retained, and decomposing matters drawn off and got rid of, but, by fitting the nozzle of a syringe to the free end of the bougie, by means of a coupling-joint of vulcanized rubber, a stream of tepid water may be gently thrown up into the cavity of the intestine above the stricture, breaking up any solid lump of faecal matter that may be lodged, thereby freeing the patient of the accumulation which forms the main source of irritation, and relieving him from the principal cause of suffering in this disease."

And, again, as to the mode of using the tubular bougie—

"The forefinger of the left hand (previously oiled, and having the interstice under the nail well filled in with soap, as also the dorsum of the nail

itself, in order to prevent the lodgment of fecal or other matters) is to be passed up into the rectum, until its tip is firmly fixed in the stricture or against it, and the extent and density of the contraction thereby fully determined. The point of the thumb is then to be applied to the forefinger close up to the anus, and retained as the finger is withdrawn, thus taking an exact measurement of the distance of the stricture from the anus. The guiding-rod is next to be placed alongside of the finger, and an indentation made upon it with the nail of the right forefinger at the point corresponding to the extreme length previously inserted. This done, the surgeon must next make allowance for the extent of the stricture itself, and to this add a further plus amount of at least an inch for the passage of the rod beyond the stricture up into the cavity of the bowel. In this way an exact knowledge is gained of the length of guiding-rod required in order to secure a certain transit through the contracted portion of the intestine. A distinguishable mark is then to be placed upon the guiding-rod, by tying a piece of fine, but strong, white ligature silk tightly round it, which the elasticity of the gutta serena readily permits of being done, the bougie itself still passing freely over without displacing it. A similar mark is also to be tied round the bougie itself at such point as the surgeon may determine, according to the degree of distension which he may desire to exercise over the stricture. These distances, once noted, permanently remain, so that the preliminary steps here detailed are required only at the first examination.

"In using the bougie, the left forefinger is to be introduced up to, and, if possible, into the stricture, and the guiding-rod, well lubricated for the anterior third of its extent, is to be passed along the finger until it reaches the contraction, when, manipulated by the right hand, it is to be entered into the stricture, and through it into the cavity of the intestine above, the requisite distance for its introduction being determined by the silk mark, which is to be left visible just external to the anus. The bougie (having been previously well smeared over with the opiate or belladonna ointment) is then to be placed upon the projecting end of the guiding-rod, and slid along it through the stricture, its length of insertion into the rectum being determined by the silk mark fixed upon it. The guiding-rod is then to be withdrawn, and all pent-up pus, blood, fecal contents, or air, allowed to escape through its centre. After the full period for the retention of the bougie in the bowel has been passed, plain or other injections, as desired, may be thrown up, and evacuated or not, at the discretion of the surgeon."

Unless for the purpose of making a primary or exploratory examination of the bowel, Mr. Tuffnell is opposed to the employment of chloroform, and this because an undue amount of injury is likely to be inflicted upon the intestine when the patient is unconscious, which will afterwards be resented by the system, and, giving rise to pain and fever, retard rather than accelerate the cure. *Festina lente* is his motto. He also does all he can to avoid irritation, by smearing the bougie with a belladonna or opiate ointment.

As for the period of time during which the bougie should be allowed to remain, this must be entirely regulated by the patient's

feelings. The rule is never to inflict an injury which requires to be recovered from. The period for retaining the bougie having expired, the next proceeding is to inject a stream of tepid water through its centre into the rectum above, the amount thrown up being regulated by the patient's feelings, repeating each successive quantity until the water returns clear and free from fæces, thus proving that the intestinal tube is free from lodgment. The injection of water may be followed by that of a small quantity of any astringent solution which the surgeon (according to the nature of the case) may wish to introduce into and leave in the cavity of the bowel. Thus, in some instances, the infusion of matico, made of double the ordinary strength, or in the proportion of one ounce of the leaves to eight ounces of boiling water, will answer well in favouring contraction in the walls of the pouch-like cavity above the stricture; whilst in others, which are accompanied by much discharge of pus or muco-purulent matter, indicative of ulceration to a considerable degree, the nitrate of silver, increased from two grains to ten grains to the ounce, may be preferred; and, if the surface be inclined to bleed freely, of gallic acid, in the proportion of twenty grains to a wine-glassful of mucilage of gum-arabic. These several applications are to be injected in small quantities, that is to say, not exceeding a couple of ounces, and permitted to remain. By these means a stimulus is given to the bowel, when unduly dilated, to contract, and to the ulcerated surface to heal.

In addition to what is said upon the use of tubular bougies the paper contains a good deal of practical information upon stricture of the rectum, especially in relation to its connexion with fistula in ano and ulceration of the bowel.

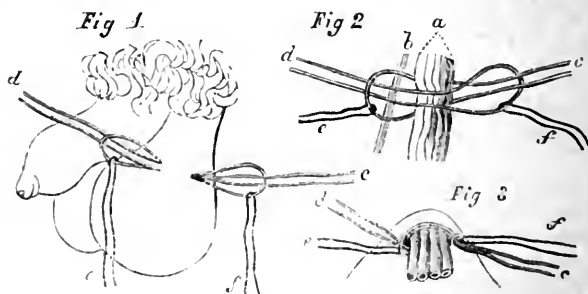
On the Radical Cure of Varicocele by Sub-cutaneous Ligature of the Spermatic Veins. By Mr. TUFFNELL, Surgeon to the City of Dublin Hospital, &c. ('Dublin Quarterly Journal of Medical Science,' November, 1861.)

The plan advocated by Mr. Tuffnell is simply an improvement upon M. Ricord's double ligature, by adding to the double loops for the enclosure of the veins a pair of *retracting guides*, by which the surgeon is enabled to withdraw the compressing medium at any moment, and to hold, as it were, a check-string upon inflammation in his hand. Before resorting to this plan, Mr. Tuffnell found that in each instance in which he used Ricord's loops suppuration in the scrotum occurred; since using the retracting guides he has experienced no such annoyance.

In describing the operation Mr. Tuffnell says—"I confine the individual to bed for a day, and then deligate the veins in the manner recommended by Ricord, and illustrated in the accompanying sketch, taken from Bernard and Huette's work, modified as will be described.

"An assistant separates and holds aside the *vas deferens*. The bundle of veins is then isolated, and taken up in a fold of the skin, the first loop of wire being carried behind the veins (Fig. 1, *d*). A

second loop of wire is then passed in the opposite direction, in front of the veins, through the same orifices as the first (Fig. 1, c). The bundle of veins (Fig. 2, a) is thus included between the two loops, the free extremity of each wire being passed through the loop of the other, as seen in Fig. 2, c, d. The wires are then drawn in opposite directions, until about as much of each loop remains projecting from the scrotum as is seen in Fig. 1—and the amount of the projection



of the loop made equal on either side. Two portions of iron wire are now taken, each four inches in length, and doubled in the middle as closely as possible. One of these is passed through either loop, and drawn to its centre. The ends are then twisted. These wires form the *retracting guides*, and give the surgeon the most complete control over the vessels of the cord, enabling him at any moment that he wishes to take the ligature from off the veins, and remove all source of irritation from within the scrotum. The main wires (Fig. 3, d, c) are now to be drawn upon equally and *forcibly* until the vessels of the cord are completely strangulated. This done, the ends of the wires are brought up and attached to a ratchet, and thereby kept tensely strained; or else twisted around the extremities of a piece of strong watch-spring, bent back into an arc, the effort of which, to restore itself, keeps up continuous tension upon the cord.

“With reference to the length of time during which it may be necessary to maintain this constriction, in order to produce sufficient adhesive phlebitis, and yet avoid the suppurative form, this must entirely depend upon the constitution of the individual. The guides for the surgeon will be the density of the swelling of the veins below the ligature, between the epididymis and the wires; the feeling of firmness to the touch; and a slight blush upon the integuments of the scrotum. These symptoms, conjoined, will denote that such a degree of inflammation has been excited as will produce obliteration of the venous trunks. The main wires are now to be cut across, and the ratchet or steel spring detached. This done, the figure-of-8 loop encircling the veins is to be opened, by withdrawing the wires through the medium of the retracting guides. All source of irritation being now removed, farther inflammation is prevented. No pus is formed in the veins, which can be carried up into the cir-

culatation, or external to the veins, in the scrotum, which can give rise to the formation of abscess in its cellular tissue. A little lead-wash to the scrotum, and rest upon the back in bed for a few days, with low diet and attention to the bowels, completes the cure. The patient, before rising, should be fitted with a suspensory bandage to support the parts. He may then resume his ordinary business or occupation. The following case—that of a medical man who was under my care during the past summer, and treated in the manner described—will well illustrate the mode of proceeding. I give the case of this gentleman, as forwarded to me by himself after returning to the country, cured.”

CASE.—My attention was first attracted to the enlarged state of the left spermatic veins during the winter of 1854, though they never caused me much annoyance till August, 1858, when I arrived in India, where the hot climate had such a relaxing effect on the integuments of the scrotum, that I found I could not manage to get about with any degree of comfort, without a bag truss, which I then commenced wearing. I remained in India till February, 1861, when I left for England, with a view to having an operation performed. During my stay in India the vein had continued to get larger—being, when fully distended, equal in diameter to my little finger—and the testicle had wasted, so as to be not more than half its original size.

July 13th, 1861.—The operation having been determined upon, on the 14th I had three grains of calomel at bedtime; followed by a dose of compound jalap in the morning.

15th.—Bowels well acted on.

16th.—Operation performed about 11 o'clock a.m. this morning. During the drawing together of the wires, and for a couple of hours afterwards, I felt great pain shooting up along the cord, and into the left lumbar region. Had forty drops of Battley's sedative after the operation, in two doses, which procured me some sleep, and almost complete relief from pain. Had barley-water to drink through the day, and some tea and toast in the evening.

17th.—Had a very good night's rest; no pain or tenderness about the cord above the ligature. Venous plexus below the ligature slightly swollen, but free from pain; no fever or constitutional disturbance. The wires were tightened four turns of the ratchet this morning, and three in the afternoon.

18th.—Passed a good night; urinary secretion full, and easily passed; no uneasiness in cord or lumbar region; veins below the ligature soft and elastic; wires tightened five turns of the ratchet; the wires were tightened again in the evening, when one of them gave way; it was, however, easily repaired.

19th.—No pain or constitutional disturbance; good night's sleep; there is a slight yellow-brownish discharge oozing from the orifices of the wires; and the left side of the scrotum presents a slight blushing fulness; the ligatures were now withdrawn without the slightest pain.

20th.—Scrotum more corrugated; no discharge from the orifices, and no pain.

21st.—The venous plexus between the ligature and the epididymis forms an oval, hardish mass, somewhat larger than an almond; no pain or discharge; the general functions uninterfered with; had a seidlitz powder this morning; low diet to be continued.

22nd.—Inflammatory deposit much reduced in size, and more globular in shape; free from pain of any kind; integuments of scrotum corrugated; ordered cold lead lotion to the scrotum.

23rd.—Lotion has had great effect in tightening up the skin of the scrotum; no pain; dense consolidation of venous plexus.

24th.—Inflammatory mass reduced in size; to have fish for dinner.

25th.—Same report; allowed up for a short time to-day.

26th.—Feeling no inconvenience from standing.

27th.—Allowed to leave town to-day; there being no pain or uneasiness about the cord or testicle, and entirely free from the dragging sensation that used to be so annoying.

The Diseases of the Prostate, their Pathology and Treatment; comprising the second edition of 'The Enlarged Prostate,' and a Dissertation 'On the Healthy and Morbid Anatomy of the Prostate Gland,' to which the Jacksonian Prize for the year 1860 was awarded by the Royal College of Surgeons of England. By HENRY THOMPSON, F.R.C.S., Assistant-Surgeon to University College Hospital, &c. (8vo, London, Churchill, 1861, pp. 364.)

This volume contains the fullest and latest account of Mr. Thompson's careful and laborious investigations in the anatomy and pathology of the prostate. It reflects credit on English surgery, being at once philosophical and practical in no ordinary degree. It supplies many new facts; it justifies, as it seems, more than one new conclusion. It furnishes evidence, for example, that the "third" or "middle lobe," as a separate anatomical portion of the prostate, must be assigned, not to the normal, but to the abnormal history of the organ; and this evidence appears to be sufficiently conclusive. It justifies, for example, the conclusion that there is a close analogy between enlargement and tumour of the prostate and those of the uterus. M. Velpeau, who suggested this idea some years ago, rested the analogy upon a belief that the uterus and prostate originated from the same centres of development in the early condition of the ovum, coupled with the fact that both these organs are liable, in after life, to exhibit tumours presenting similar external characters. Mr. Thompson does not think that ground of analogy the strongest, which is derived from regarding the uterus of the female and the prostate of the male as morphological equivalents, and he indicates other grounds, which, taken together, furnish what he looks upon as a broader and firmer foundation for the idea.

"Firstly.—In studying the typical plan on which the entire genito-urinary apparatus of the two sexes is constructed, the most recent labours of modern philosophical anatomists confirm the view that the analogue of the uterus, or rather of the uterus and vagina combined, in the male, is the prostatic vesicle or utricle. This is the view taken by Leuckart, in a recent article written for the 'Cyclopædia of Anatomy and Physiology.' It has been also maintained by Dr. Simpson, in a very elaborate 'Mémorial on Hermaphroditism and Sexual Malformations generally,' which first appeared in the same work, but which is now republished, with considerable additions. The prostate, then, although not of itself the absolute equivalent of the uterus, contains it in the utricle, situated as this cavity is in the very centre of the organ.

"Secondly.—The point, however, on which I would lay greater stress is, that the prostate and uterus are organs whose bulk is constituted by the same tissue, namely, the organic muscular fibre. No other organ in the body besides these two is similarly constructed by thick masses of this structure; elsewhere it is distributed in membranous layers. This analogy of structure is, perhaps, in relation to the pathological question before us, stronger than that of identity of origin in early foetal life, since it has more influence, doubtless, in determining the appearance of tumours and outgrowths of similar character, than any other circumstance.

"Thirdly.—The two organs thus similarly constructed, are very frequently the subjects of tumours, identical both in external and histological characters. Thus, in the uterus, we find these formations nearly or completely isolated made up of organic muscular fibres, with connective tissue, imbedded in the substance of the organ, or standing out in relief from either surface. In the prostate we meet with precisely the same tumours, and they are similarly disposed. Although, on the high authority of Rokitsansky before referred to, an analogy has been pointed out as existing between these imbedded tumours of the prostate and those of the mammary gland, I confess that the grounds of that analogy appear to me less complete than those which indicate their relation to the fibrous tumours of the uterus as just suggested. The prostate differs very materially from the mamma (and, in a corresponding degree, resembles the uterus) in being mainly constituted by tissue designed to exert a mechanical power; while the mamma is simply a secreting organ, or gland. The prostate is a muscular organ, but permeated by glandular tubes and follicles. Were the small glandular tubes found in the inner wall of the uterus, prolonged more deeply into its substance than they are, the analogy between the uterus and prostate would be complete. The organic muscular tissue appears to have a tendency to become the nidus of isolated masses of like tissue, in structures formed by it; the type of these being found in the uterus. In the prostate we have the same phenomenon, plus certain imperfectly formed gland-tissues, but the addition may be fairly regarded as an accident, depending on the presence of glandular elements in the muscular organ in its normal state. Hence the amount of gland-tissue so intermixed with the tumour is extremely variable in different specimens. The fibrous tumour, we know, in whatever part of the body it occurs, is very prone to imitate in some measure the tissue in which it is placed. Thus, as Mr. Paget remarks, spiculæ of bone may be frequently observed, when it is situated in bony structures; a disposition which, I believe, accounts for its acquisition of some gland-elements when it appears in the prostate.

"Fourthly.—In the uterus we are familiar with another form of tumour, which, springing from the interior, and forming a polypoid growth there, is much more intimately connected with the structure than the variety just described, perfect continuity of tissue existing between it and the polypus. So from the median portion of the prostate we meet with an outgrowth, tending in form to become truly polypoid, which continues its development in the direction of

least resistance, and exhibiting complete continuity of structure with the prostate itself. It contains also the glandular elements proper of the organ in varying proportions.

‘It may be further observed that all these outgrowths and tumours, among the latter, especially those of the fibrous kind, may remain of so small a size, both in the uterus and in the prostate, that the bulk of the organ is not sensibly increased, and no signs indicating their existence during life are produced; while, on the other hand, they may increase to an enormous extent, so as to exceed by very many times the natural size and weight of the organ in which they originated, and give rise to the most alarming derangements of function.

“Fifthly.—The two organs are subject to considerable hypertrophic enlargement, mainly consisting of their constituent fibrous elements. And in both this condition may be associated with some tumour formation, or it may exist independently of it. In the latter case, the hypertrophy may be general or local, affecting the whole or certain parts of the organ; and, when thus local, affecting particular spots more commonly than others. These remarks apply equally to the prostate and to the uterus.

“Sixthly.—The two organs are liable to these changes after the prime of life has passed. Bayle, whose observation is quoted by Rokitansky, and verified by Dr. Robert Lee, says that 20 per cent. of women after 35 years of age, have fibrous tumours of some size in the uterus. I have found prostatic tumours in 30 per cent. of males after 50. In women, however, the tendency to this formation declines after 50, although it cannot be said to cease. Nevertheless, it is exceptional after that period. It is generally regarded as most active during the term of uterine functional activity, or rather during the latter moiety of the time. The age at which the reproductive function of man is most vigorous is certainly not that at which a like tendency in the prostate is evinced; but, on the other hand, it may not be forgotten that the term of productiveness is not limited in the case of the male, as in the opposite sex. And still further, it may, I think, be fairly admitted that our acquaintance with the prostatic function is not at present sufficient to forbid, but on the other hand rather to encourage, the supposition that it is possible that its activity may not in any way diminish, if it be not augmented, during the middle and later years of life, when the hypertrophic disposition is manifested. One thing is certain—the prostatic secretion, whatever its purpose, does not appear to be at that time less plentiful, judging from the state of the organ after death, than at any previous age.”

The different chapters on diseases of the prostate are all rich in the matters about which a practical man wants to be informed, and it is difficult to say which is least rich in this respect. We would mention, however, as those from which we ourselves have derived most information, one on the effects of enlarged prostate in relation to the function of micturition, retention, incontinence, engorgement and overflow, and another on a not uncommon complication of enlarged prostate, viz., stone in the bladder, and on the best modes of applying lithotripsy as a means for its removal.

The Pathology and Treatment of Venereal Diseases, including the results of recent Investigations upon the Subject. By FREEMAN J. BUMSTEAD, M.D., &c., Lecturer on Venereal Diseases at the College of Physicians and Surgeons, New York, &c. (Large 8vo, Philadelphia, Blanchard and Co., 1861, pp. 686.)

In the preparation of this work (which, if it be judged by form and bulk, would seem to be intended to achieve the same position in American surgical literature which Mr. Acton's work on the same subject has achieved in English) the author tells us that his object has been "to furnish the student with a full and comprehensive treatise upon venereal diseases, and the practitioner with a plain and practical guide to their treatment." In carrying out this design, he adds, considerably modifying the previous promise, "theoretical discussions have been made subordinate to practical details; and in the belief that the success of treatment depends quite as much upon the manner of its execution as upon the general principles upon which it is based, no minutiae calculated to assist the surgeon or benefit the patient have been regarded as unworthy of notice." Further, we learn that to collect into one volume, and thus render accessible to the American reader, the additions to our knowledge of venereal diseases which have been made within the last ten years, has also entered into his purpose. As among the most remarkable of these additions, he directs particular attention to the distinct nature of the two species of chancre; the innocuousness of the secretion of the infecting chancre, when applied to the person bearing it, or to an individual affected with the syphilitic diathesis; the asserted removal of secondary lesions; the assumed fact that syphilis pursues the same course, whether derived from a primary or secondary symptom, commencing in either case with a chancre at the point where the virus enters the system; the definite period of incubation of the true chancre, and of general manifestations; the inefficacy of the abortive treatment of syphilis; and the phenomena of syphilization and their correct interpretation.

One or two illustrations will convey a sufficiently clear notion of the manner in which the work has been executed, and the position which it will probably take among authorities on venereal affections. In an introductory chapter Dr. Bumstead gives a theoretical history of venereal disease, based upon the researches of Bassereau, Langlebert, and Chaballier, which, notwithstanding its ingenuity, can scarcely be admitted as yet within the bounds of exact historical research. Dr. Bumstead admits that some of their conclusions are startling, but still considers that they cannot be called in question. Unfortunately, however, we cannot attach that weight to Dr. Bumstead's opinion in this respect that we might desire to do, for we find him reiterating the theory of the introduction of syphilis into Europe by the crews of Columbus's ships, in 1493, as the most probable one, apparently unconscious of the fact that evidence exists as trustworthy as any which has yet been advanced on the question, proving the existence of syphilis in Italy in 1492, and 1493, and in Germany in the summer of 1493.

Turning to the body of the book, we read almost at the outset, in the section on the causes of gonorrhœa—"Of one thing I am *absolutely certain* [the italics are the author's own], that gonorrhœa in the male may proceed from intercourse with a woman with whom coitus has for months, or even years, been practised with safety, and this, too, without any change in the condition of her genital organs perceptible upon the most minute examination with the speculum." And again, "For my own part, I desire to state that, while pursuing the investigation which has led me to believe in the frequency of gonorrhœa, independent of contagion, I have not entertained a single case in which the moral grounds of certainty have not been irresistible; and that a number of my patients have been medical men, and intimate acquaintances, whose sins against morality were fully known to me, who could therefore have had no motive for concealment, and with whom mistake or deceit has been either in the highest degree improbable, or in repeated instances *impossible*" (pp. 46, 47). This trick of positive assertion too frequently does duty for detailed observations, and, however much we may be disposed to value Dr. Bumstead's opinion, detracts greatly from its weight. The same habit vitiates in no small degree Dr. Bumstead's examination of the doctrine of the quality of the syphilitic—or, as he would say, chanerous—virus, and its consequences. Thus, he speaks of this doctrine as occupying "an impregnable position," although it is still the subject of experimental observation. As a consequence, his history of the doctrine reads as the history of a demonstrated truth, and ignores those important considerations and negative details which are all-important in awakening a student's habits of observation.

As an example of a definition, the following will be read with interest—"A transitory stricture signifies an abnormal contraction of the urethra, capable of undergoing complete resolution through the action of natural forces." (p. 240.) Happily such specimens of medical euphemism are few.

Turning to more practical questions, we find that all that is said of the reasons which lead to the use of mercury in syphilis, and the soundness of those reasons, is as follows:

"Mercury came into general use in the treatment of syphilis within fifty years after the appearance of the Italian epidemic, and in spite of the many attempts which have been made to supplant it by other remedies, still holds its ground as the only reliable agent for combating secondary lesions. At the present day its efficacy is admitted both by regular and irregular practitioners, though the latter generally administer it furtively and under the guise of some other name. It is the active ingredient of most of the 'life-balsams' and 'essences of sarsaparilla,' the marvellous virtues of which for the cure of 'private diseases' are proclaimed in our daily and weekly journals (religious as well as secular). The elastic principle of 'similia similibus' is also made to cover it, the more conservative homœopaths giving it (generally in the form of the protiodide) in the doses prescribed by the 'U. S. Pharmacopœia,' and even the extremists, not trusting to the 'dynamic action' of high potencies, but employing the first trituration (one part to ninety-nine of sugar of milk), put up

in bottles carefully coated with black paper to protect it from the action of the light" (p. 500).

Again, notwithstanding that eleven pages are devoted to an account of "*syphilization*," it is almost impossible to gather from it a true, practical idea of the nature of the treatment, and the manipulation it involves.

We quote the following conclusions of Dr. Bumstead on the syphilitic virus, as an illustration of his style, and would remark, in conclusion, that, notwithstanding the drawbacks we have mentioned, his work will doubtless become, from its details of treatment, as well as from its embodiment of the most recent views on syphilis, a favorite among our American brethren.

"1. From the existence of two kinds of chancreous virus, it does not follow that there are two kinds of syphilitic virus. The term 'syphilis' implies not only a local, but a general, disease, conditions which are alone fulfilled by the hard chancre and its consequent constitutional symptoms. The soft chancre and its attendant bubo should not, properly speaking, be described under the head of syphilis, but be considered apart, like gonorrhœa. It is also desirable to adopt a different name for this ulcer, as, for instance, the term 'chancreoid,' which is already much employed, especially by the French, and which will frequently be used in the following pages as synonymous with 'soft' and 'non-infecting chancre.' The complete separation, however, of these two forms, in describing chancres and their attendant symptoms, would, perhaps, at the present time be objectionable, while yet the new doctrine on this subject is not familiar to all, and I shall, therefore, follow the usual course, and describe them together.

"2. The distinction which is now drawn between the non-infecting and infecting chancres explains in a great measure the variance which has long existed with regard to treatment between the 'mercurialists' and 'non-mercurialists;' the soft chancre, being a strictly local disease, requires no constitutional remedies, unless, in exceptional cases, as adjuvants to local treatment. Mercury is of value only in cases of hard chancre and general syphilis. Since the number of soft chancres greatly exceeds the number of hard chancres, it is evident that the general results of treatment may be made to sustain either the use or disuse of mercury, if exclusively applied to both forms in common.

"3. A comparison of the three poisons of gonorrhœa, the soft and hard chancre, as far as we are at present able to understand their nature, leads to the following conclusions:

"The poisons of gonorrhœa and of the chancreoid are alike in that their action is limited, and never extends to the general system; nor does one attack afford the slightest protection against a second. They differ in that the poison of gonorrhœa may arise spontaneously, while that of the chancreoid, so far as we know, never thus originates; that gonorrhœa chiefly affects the surface—true ulceration being rarely induced—and, in its complications, most frequently attacks parts connected with the original seat of the disease by a continuous *mucous* surface, as the prostate, bladder, and testicle; while the soft chancre, on the contrary, is an ulcer, involving the whole thickness of the

integument or mucous membrane, and its complications are seated in the *absorbent* vessels and ganglia. It would also appear that the poisons of these two affections are limited to one common vehicle, viz., pus. Van Roosbroeck, on the authority of Rollet, has proved by experiment that if the discharge of gonorrhœal ophthalmia be deprived of its pus-globules by filtration, the remaining fluid is innocuous; and Rollet states that he has obtained like results with the pus of soft chancre. If these experiments can be relied on, they prove that the virus is not diffused throughout the purulent secretion, but is confined to the pus-globules which it contains. This conclusion is sustained by the fact that neither the poison of gonorrhœa nor that of the chancreoid ever reaches the general circulation, and it is well-known that pus-globules are not capable of absorption. When the purulent matter of a soft chancre enters the absorbent vessels, as occurs in the formation of a virulent bubo, it is arrested by the first chain of lymphatic ganglia and goes no further. The paint used in tattooing is sometimes conveyed to a ganglion in a similar manner; but neither in this case nor the former is there complete absorption. The virus of the hard chancre is alone capable of infecting the system at large and of affording protection by its presence against subsequent attacks. Unlike the poisons of gonorrhœa and the chancreoid, it is not limited to purulent matter, but exists in the blood, in the fluids of secondary lesions, in the semen, and probably in other secretions. The secretion of one form of the hard chancre (the superficial variety), as shown by microscopical examination, is often entirely destitute of pus-globules, and the presence of the virus in secondary symptoms is proved by their power of contagion, and in the semen by the occurrence of hereditary syphilis in the offspring when the father is alone infected.

"There is no opposition whatever between the three poisons; they may all coexist in the same person, who may at the same time have gonorrhœa, a chancreoid, and a chancre; hence we may explain a case related by Acton, in which each of three students contracted one of these diseases from intercourse with the same woman on the same day. Two of these poisons may be present in the same fluid, as when the secretion of a hard and soft chancre mingles with that of gonorrhœa; or, as in "mixed chancre" resulting from inoculation of the same part, either at the same time or successively, by the virus of the chancreoid and that of the chancre. The secretion of the soft or that of the hard chancre, and its consequent secondary symptoms, may also mingle with other animal poisons, as the vaccine virus, and each will produce its usual effects unmodified by the presence of the other.

"Apparent exception to some of these statements are met with in the practice of syphilization. * * * * " (pp. 345—348).

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